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EVALUATION OF STRUCTURAL ADJUSTMENT PROGRAMS IN JORDAN

 **FUAD M. KREISHAN** 

**A thesis submitted in partial fulfilment
Of the requirements of the
University of Northumbria at Newcastle
For the degree of
Doctor of Philosophy**

**Research undertaken in the
Newcastle Business School**

August 2004

ABSTRACT

This thesis evaluates the macroeconomic impact of structural adjustment programs (SAPs) in Jordan during the period 1992-2001. The study has made an attempt to address and find answers to the following three interrelated questions. Firstly, to what extent have the programs achieved their own targets? Secondly, have the SAPs resulted in an improvement on the initial economic situation in Jordan before the introduction of SAPs? Thirdly, what are the effects of typical SAP's instruments on the main macroeconomic variables in Jordan?

In investigating these questions, the thesis has applied three different approaches: (i) the before-after approach, (ii) the actual-target approach, (iii) using some statistical tests, the study estimated an Error-Correction Model for the main macroeconomic targets of the structural adjustment programs.

The statistical findings, in general, suggest that the most successful aspect of Jordanian experience, under the structural adjustment programs, were the remarkable increase in the international reserves and exports. These programs, however, did not have much impact on the economic growth, the inflation rate and the imports.

As to the effectiveness of the SAPs instruments, the results have shown that the domestic credit, the interest rates and the devaluation have significant impact on the behavior of key macroeconomic targets, while there was little effect to fiscal policy. Although the variation in these instruments seems to lead macroeconomic targets towards the desired goal, it also appears, in some cases, to have unfavorable effects on the program objectives.

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LIST OF ABBREVIATIONS

ADF	Augmented Dickey-Fuller
APC	Arab Potash Company
BOP	Balance of Payments
BWIs	Bretton Woods Institutions
CAS	Country Assistance Strategy
CBJ	Central Bank of Jordan
CDF	Comprehensive Development Framework
DOS	Department Of Statistics
DW	Durben Watsen Statistic
ECM	Error-Correction Mechanism
EFF	Extended Fund Facility
EIU	Economist Intelligence Unit
EMP	Euro-Mediterranean Partnership
ESAF	Enhanced Structural Adjustment Facility
EU	European Union
FTA	Free Trade Agreement
GEE	Generalized Evaluation Estimation
IDA	International Development Association
IFS	International Financial Statistics
IMF	International Monetary Fund
JD	Jordanian Dinar
JPMC	Jordan Phosphate Mines Company
LDCs	Less Developing Countries
MEED	Middle East Economic Digest
M-L	Marshall-Lerner Condition
MOP	Ministry of Planning
NAF	National Assistance Fund
PLO	Palestine Liberation Organization
PRGF	Poverty Reduction and Growth Facility
PRSPs	Poverty Reduction Strategy Papers
SAP	Structural Adjustment Program
SBA	Stand-By Arrangement
SDR	Special Drawing Right
SSNs	Social Safety Nets
UN	United Nations
U-Test	Mann-Whitney test
VAR	Vector Auto-Regression
VAT	Value Added Tax
WB	World Bank
WTO	World Trade Organization

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DECLARATION

I certify that this work has not been accepted in substance for any degree and is not concurrently submitted for any degree other than that of Doctor of Philosophy of the University of Northumbria at Newcastle. I also declare that this work is the result of my own investigations except where otherwise stated.

DEDICATION

To My Parents

CHAPTER ONE

INTRODUCTION

1.1 The Study Background

Jordan is a small open economy with very limited natural resources and high population growth rates. Its economic structure has been intricately tied to its relations with the external world, particularly with neighboring Arab countries, in terms of population movements and inflows of finance and trade. Indeed in the 1970s, Jordan has enjoyed substantial financial aid from neighboring Arab oil states, which also benefited Jordan by attracting hundreds of thousands of its educated and skilled workers and by opening up markets for Jordanian products. Consequently, Jordan enjoyed high growth rates, reflected in almost 11 per cent average annual growth rates for real GDP, with an average of 7.5 per cent growth rates in real per capita income during the 1970s. Moreover, Jordan achieved full employment for the same period [CBJ, 1996 and Piro, 1998].

The plethora of foreign aid, as well as income from other sources, had made the government lax in its spending habits. The overall budget, deficit during the 1980s, constituted almost 23 per cent of the GDP [CBJ, 1996]. In that period, the country witnessed prosperity and expansion in the basic infrastructure and welfare services, education, health care, transportation, communication, etc. However, despite these achievements, Jordan could not overcome its basic imbalances in its economic structure, where the increases in external finance led to an increase in total

consumption to levels higher than GDP, resulting in negative domestic savings. Thus, large budget deficits emerged during the 1970s and significantly so during the 1980s. Indeed, in 1983, after the decline in oil prices having led to a large fall in the oil revenues of the Arab oil countries, this resulted in an overall recession both in the Gulf countries and in the whole region. Consequently, this influenced the Jordanian economy by lowering the demand for Jordanian labor, reducing the demand for its exports and more seriously reducing the regional assistance to the country. Whereas, in the 1970s Jordan was able to cover its deficits easily by foreign aid and soft loans, during the 1980s, as the subsequent decline of foreign aid was not matched by substantial budgetary cutbacks, the deficits were heavily covered by high interest commercial loans from international commercial banks and other external sources.

The result of the regional and international climate combined with mismanagement of the economy was a growing balance of payments deficit, declining foreign exchange reserves and a much larger and more onerous burden of foreign debt. The macroeconomic indicators show that real GDP growth rates decline from 11 per cent on the period 1973-1980 to about 2.5 per cent during 1983-1987 and as a result, per capita income decreased by an average rate of -1.7 per cent and unemployment increased to about 9 per cent in 1988 [Kanaan and Kardoosh, 2002].

As the situation continued to deteriorate, the crisis came to a head in 1988, when the country became one of the most heavily indebted countries in the world, with its external debt at twice the size of GDP. As a result, the government could not service

its debt - the foreign reserves at the central bank declined considerably to only US\$ 109 million [CBJ, 1988]. This was followed soon after by a devaluation of the JD, which lost about 50 per cent of its value. The government attempted to correct these imbalances by domestic efforts only and accordingly, austerity measures were announced in the late of 1980s, which included expanding the tax base and increasing tax rates for certain items and a complete ban on luxury imports. These measures, however, were not sufficient to improve the foreign exchange position, and the budget deficits remained high. By the spring of 1989, the Jordanian government realized that the burden had become too large and without debt rescheduling and external resources the costs of these austerity measures would be too high. Therefore, the assistance of the International Monetary Fund (IMF) and the World Bank was required to reschedule debt repayments.

The government reached an agreement with the IMF and World Bank for an economic Structural Adjustment Program (SAP) for the 1989-1993 period. This program called for economic austerity measures and restructuring to overcome the economic crisis and revitalize economic growth. Indeed since 1989, Jordan has gradually been involved in a process of macroeconomic adjustment and market reform. On the other hand, at the same time, various changes have been taking place involving domestic, regional and international transitions with regard to the Kingdom. The main dramatic transitions that began roughly in 1989 and then transformed the country into new direction include:

- (i) Structural adjustment programs (SAPs)
- (ii) Political liberalization and democratization, mainly through new national parliamentary elections and legalized political parties.
- (iii) Opening the economy to a globalizing international environment, most notably through Jordan's World Trade Organization (WTO), the Euro-Mediterranean Partnership (EMP) and the Free Trade Area Agreement with USA.

In addition to the above dramatic changes, Jordan experienced two other significant political developments. The first was a major shift in Jordan's foreign policy in which a formal peace treaty with Israel was signed, ending 46 years of war and tense relations between the two countries. The second was the succession of King Hussein after ruling the country for almost half a century by his eldest son King Abdullah II in 1999.

In this study, however, the focus will be on the stabilization and structural adjustment programs for the period 1989-2001. We will explore the Jordanian experience under the SAPs and this study will mainly assess the macroeconomic impact of stabilization and structural adjustment programs. It is also important to note, however, what this study is not about - it is not intended to examine the social and welfare impact of SAPs or even the political economy of SAPs. Instead, this

study will focus on the evaluation of the effectiveness of SAPs on the main macroeconomic indicators.

Structural adjustment programs are a controversial issue. First and foremost, because these programs are based on neo-liberal economic theory that assumes automatic market adjustments towards full equilibrium. Secondly, the major debt crisis that faced most developing countries in the early 1980s is so very much deeper than structural adjustment can possibly responded to. Thirdly, theory and evidence have shown that when the IMF and World Bank policies are implemented, the outcome is often a drastic increase in poverty, unemployment and inequality. Finally, SAPs failed in some cases to achieve their objectives.

In the light of the above, the Jordanian experience provides an interesting case study, as the onset of economic crises in Jordan in 1988/1989 was singled out by a serious deterioration in the balance of payments and pressure on reserves and exchange rates. The consequence was that the country had become a victim of the “debt trap” and thus the country had to call on the Bretton Woods Institutions (BWIs) as a last resort. On the other hand, while the economy was under SAP during the period 1989-2001, several regional factors, which had nothing to do with SAPs, strongly affected the performance of the Jordanian economy, including the Gulf war/ 1991 and the following peace agreement with Israel in 1994.

Jordan's economic reform efforts, however, were supported by a series of agreements with the IMF and the World Bank covering almost 14 years from 1989-2004 - in 1989, 1992, 1995, 1999, and 2002. These agreements combined stabilization with structural adjustment. The orthodox stabilization policies limit money and credit growth, reduce the fiscal deficit and implement devaluation. The structural adjustment policies increase the efficiency of the economy through privatization, trade liberalization along with financial deregulation.

Although Jordan, as a country in transition, has attracted several international group of scholars to undertake research or publish books, most of these studies have focused on the political economy of reform, the political liberalization and democratization and state-business relations {see Carroll (2003), Joffe (2002), Ryan (2002) and Piro (1998)}. Yet compared to other regions there has been a serious dearth of empirical research concerning the macroeconomic impact of SAPs in Jordan. Here we hope to fill an important gap in the literature.

1.2 Objectives of the Study

The objective of this study is to assess the macroeconomic effect of structural adjustment programs in Jordan. In fact Jordan has been under several programs (1989-1993, 1992-1998, 1999-2001 and 2002-2004). The first structural adjustment program 1989-1993 (**SAP I**) entered into force in early 1989; however, the program was suspended by the Gulf crisis in 1990/1991. Soon after the end of the first Gulf war, a second agreement with the IMF and World Bank was signed in 1992-1996.

This program was reviewed in 1996 and the result was the extended structural adjustment program 1992-1998 (SAP II). Once the country had implemented the second program (SAP II), the authorities renewed the reform efforts by adopting a new SAP to cover the period 1999-2001 (SAP III). Of course, according to IMF advice, the country needed a last phase of SAPs (according to the government announcements) to cover the period 2002-2004. In general, by the end of 2004, the country will end almost 14 years of SAPs.

For the purpose of this study, we will consider the period (1992-2001) recognized as a period of stabilization and structural adjustment. The study excluded the 2002-2004 program from the analysis because when the study embarked on the empirical analysis of SAPs the 2002 official data were not available. In short the main objective of this study is to fill the gap in the literature concerning the impact of SAPs in Jordan and to contribute something new by addressing the following questions:

- (i) To what extent have the programs achieved their own targets?
- (ii) Has the SAPs resulted in an improvement on the initial economic situation in Jordan before SAPs?
- (iii) What are the effects of typical SAP's instruments on the main macroeconomic variables in Jordan?

1.3 The Research Methodologies

In order to achieve the objectives of this study, it was necessary to consider the following aspects:

- (i) The related theory of SAPs and the alternative approaches that are usually used to estimate the effects of the SAPs.
- (ii) An assessment of the program's performance by conducting comparison between actual macroeconomic performance under the SAPs with targets set at the inception of the programs.
- (iii) Using the before-after method, which basically compares the macroeconomic performance before with the performance after the program, was initiated.
- (iv) To provide some empirical foundation for the analysis, the effects of such programs are illustrated through simple econometric modeling of time series data using regression analysis.

The main sources of data collection that were used for the preparation of this study and for estimation include:

- (i) Central Bank of Jordan (CBJ), several Annual Reports and Monthly Bulletins.
- (ii) The International Monetary Fund, International Financial Statistics (IFS).

1.4 Limitations of the Study

This study is essentially an evaluation of the recent experience of the Jordan's structural adjustment programs during the period 1992-2001. This study, however, is neither intended to present all aspects of SAPs nor to present all defects the Jordanian economy. Indeed, it is hoped that by focusing the research on the macroeconomic effects of SAPs, the results obtained would be helpful for both Jordanian policy makers and those working on the SAPs. Due to limited time, data availability and quality, material and the wide scope and diversity of the literature on the SAPs, it was difficult to carry the research any farther. On the other hand, the study had to neglect many related issues concerning the impact of the SAPs, which were important for the structural adjustment perspective, particularly the social and sectoral impact of SAPs. It is also important to emphasize that this study is neither about SAPs nor about Jordan economy, but both. Finally, it must be stressed that the results of this study should be seen in the light of methods applied and the period covered (1992-2001) which implies that the last SAP (2002-2004) was excluded, as the official data for this period was not available in time of this study.

1.5 Outline of the Study

The rest of this study contains seven chapters: Chapter Two provides historical background of the Jordanian economy and some main issues related to the features and performance of the Jordanian economy. Chapter Three discusses both the theoretical and empirical aspects of SAPs. Particular attention is paid to the objectives and main instruments of SAPs towards which they are directed thereby

hoping to achieve the goal of macroeconomic adjustment. Related topics, which are also covered in Chapter Three, are: the main critiques and impacts of SAPs, the models that will be used for estimation purposes. Chapter Four offers some discussion on the main approaches to the evaluation of SAPs and another objective of this Chapter is to provide an overview of the main existing evaluatory literature on SAPs. Chapter Five contains two main parts: the first part presents the structural adjustment programs which Jordan implemented during 1989-2001, showing the objectives and policies of these programs. The second part, offers preliminary assessment of Jordan's SAPs. Chapter Six which focuses on the macroeconomic effect of Jordan's SAPs, contains two main parts. The first part, detailed use is made of the target-actual evaluation methodology to assess the macroeconomic impact of Jordan's SAPs. The second part of this Chapter utilizes the macroeconomic effect of SAPs using a before-after approach. Chapter Seven reviews the existing time series literature relevant to techniques that are applied in estimating the suggested models in Chapter Three. Finally, Chapter Eight summaries the main achievements and contributions of this study and hence offers some recommendations and indicates the areas which are worth considering for further research.

CHAPTER TWO

THE JORDANIAN ECONOMY-AN OVERVIEW

2.1 Introduction

Jordan has been recognized in the literature, as a small open or as a semi-rentier economy. Indeed, the economy of Jordan is characterized by these two terms, in one hand; Jordan is price taker in the world market and has a high degree of openness (measured by the ratio of its exports and imports to the GNP). On the other hand, given its economic structure and minimal resource endowments, Jordan has, throughout its entire history, been dependent on various sources of external financial flows (foreign aid and workers' remittances).

By the end of 2004, Jordan will have implemented almost 14 years of structural reform programs supported by the International Monetary Fund and the World Bank. It is hoped, after the completion of the reform program process, that the Jordanian economy will have the ability to boost economic growth, restore domestic macroeconomic stability, build foreign reserves and alleviate the Kingdom's twin problems: poverty and unemployment.

The aims of this chapter are to present a general review of the performance of Jordanian economy as well as examining, briefly, the main features of Jordanian economy. In general, this chapter will include a brief history of Jordan, the land and

people, Jordan's recent economic history and the main features of the Jordanian economy.

2.2 A Brief Historical Background of Jordan

After the fall of the Ottoman Empire in the First World War, the liberation of Jordan from Ottoman sovereignty was achieved in 1918. In 1920, the newly formed League of Nations awarded the territory now comprising Jordan, the West Bank, the Gaza Strip (Palestinian Authority), Israel and Jerusalem to the United Kingdom as the mandate for Palestine and Trans-Jordan. In 1922, the British divided the mandate into two parts, designating all lands west of the Jordan's river as Palestine and that east of the river as Trans-Jordan.

The Emirate of Trans-Jordan was placed under the rule and leadership of Emir Abdullah Bin Al-Hussein who had been one of the principal figures of the Arab Revolt against the Ottoman Empire. Jordan became fully independent in 1946 with the ending of the British mandate. King Addallah changed the name of the country to the Hashemite Kingdom of Jordan.¹

In 1950, the West Bank was annexed to Jordan, and as a result the population of Jordan grew to more than three times the level of the original population of Jordan in 1947. It was the period of recovery from the effects of the 1948 Palestinian tragedy, and adjustment to the enlargement of the country with the expansion of its territories, including the West Bank. This has, however, provided Jordan with more

demographic and economic features. Indeed, this increase in population size created economic pressure on the country's limited resources, to meet the increasing local demand for consumer goods and other services like education, health, communications and also, to meet the military requirements to face the unstable situation on the front line with Israel. Jordan ruled over the West Bank until 1967 where the Palestinians living there enjoyed Jordanian citizenship.

In the 1967 war with Israel, Jordan lost the West Bank, which was occupied by Israel. Moreover, the 1967 war imposed a heavy burden on Jordan. It brought a flow of refugees, estimated at 300 thousand, from both the West Bank and the Gaza Strip [Kanovsky, 1976: 36]. The period after 1967 war was a period of recovering and adjusting to the consequences of the loss of territory and the influx of the second wave of refugees. Once again Jordan faced a most critical time in Jordan's history when the 1970 civil war broke out between the Fedayeen Group -the Palestinian member of Palestine Liberation Organization (PLO) - and the Jordanian army.

By ending the conflict with the Palestinian military groups, Jordan enjoyed a period of prosperity with the first boom in oil prices in 1973. However, in the mid of the 1980s and in particular, on July 1988, Jordan announced that it was officially severing all legal and administrative links with the West Bank and surrendering its claims to the PLO. In fact this made the Palestinians of the West Bank anxious and pushed them into selling their Dinars, sparking a downward slide in the value of the

Jordanian Dinar (JD). In the panic that ensued the Central Bank of Jordan had to regulate providing foreign exchange to the private sector or even to the public.

The crisis came to a head in 1988, when the Jordanian government was unable to meet its debt service obligations that reached US\$ 8.3 billion [Al-Nabulsi, 1994: 175]. This was soon followed by sharp devaluation of the JD, which was a precondition in reaching an agreement with the IMF and World Bank, to adopt the so-called structural adjustment program.

On the political side, the year 1989 was a turning point in Jordan's history, when a parliament and the first multiparty elections were established. Since that time, Jordan has become the most democratic Arab country [Malik, 1999] where the government has taken action to rescind martial law, re-legalize political parties and introduce new press legislation. In 1990/1991 the breakout of the Gulf crisis and first Gulf war imposed a heavy burden on the country and its weak economy. To make the situation worse, the Gulf war suspended the SAP and thus aggravated Jordan's already serious economic problems.

In July 1994, the Jordanian government signed a peace agreement with Israel, ending 46 years of war and offensive relations between the two countries. It was widely believed that in the aftermath of the Jordan-Israel peace agreement, there would be economic cooperation yielding substantial economic prosperity to Jordan. However,

in reality, the peace was to prove an economic disappointment, providing little and much less investment than was hoped for.

In February 1999, after 46 years of ruling the country, King Hussein died. It was certainly a dramatic and historic turning point for Jordan and to a large extent for the region as well. However, the death of King Hussein and the succession of his son, King Abdallah II, have had a pronounced effect on the liberalization process. The New King has directed the government to speed structural and market reform by further liberalizing the economy as a means of lifting the country out of a recession, marked by unemployed and widespread poverty.

2.3 Jordan's Topography

Jordan is a small Arab country, occupying a strategic position at the crossroads of the Middle East. It borders Syria to the north, Iraq to the East, Saudi Arabia to the South and Palestine and Israel to the west. The country enjoys a variety of geographical areas with unique features - the fertile areas in the north and the Jordan valley, the desert (Badia) covering more than two thirds of the country in the east and south east, high mountains like the Al-Sharah mountains in the south and the Dead Sea, the lowest area in the world, 400 meters below sea level. Jordan occupies an area of 92.300 Sq.Km with a 5.3 million population and an annual growth rate of 2.8 per cent for the year 2001 [Department of Statistics (DOS), 2001].

Jordan has a similar population structure to the rest of the Arab states. More than 67 per cent of the population is under 25 years [World Bank, 1998]. The mortality rate is 5 per cent (per 1000 population), while life expectancy is 70 years for male and 72 years for female for the year 2001 and about 79 per cent of Jordan's population is urban, most of them living in the capital [DOS, 2001].

2.4 The Recent Economic History of Jordan

To understand the main features of the Jordanian economy, it is helpful to introduce a brief review of the main events, which have had significant effects on the economy of Jordan from the time of independence to the present day.

2.4.1 Period (1948 –1967)

In 1948, after the arrival of the refugees as a result of the Palestinian tragedy war, the population of Jordan tripled in one year [Abdallah, 1994: 57]. It was a drain on the economy to meet these sudden demands. Hence, as the country had limited natural and capital resources, the Jordanian government began its dependence on foreign aid and in the same time it began expanding the main services, even the government itself increased in the size and range of its activities, including military expenditure [Day, 1986: 97].

In the 1950s, the services sector grew gradually, along with the mining and manufacturing sectors as a consequence of government investment in these sectors, as well as an influx of the refugees who worked mainly in services and trade.

Therefore, the economy shifted dramatically away from its limited agricultural orientation to a more service based economy [Piro, 1998: 30]. By 1961, almost 45 per cent of the labor force was employed in the service sector [Gubser, 1983: 54].

This period witnessed the adoption of planning policies, leading to the first Five-year plan 1963-1967 for economic and social development, later changed to the 1964-1970 Seven-year plan [Ministry of Planning (MOP), 1986]. This plan was disrupted by the 1967 war, which created new social and economic problems, which we will refer to in the next subsection. It is notable that despite all of the above, the Gross National Product (GNP) grew briskly at an annual rate of 11 per cent per during the period 1954-1967 [Gubser, 1983: 51].

2.4.2 Period (1967-1973)

The years from 1967 to 1973 were the most difficult period in Jordan's economic history, as a result of two wars in almost four years. On the one hand, the 1967 Six Day war with Israel imposed a heavy burden on Jordan resulting, not only in the change in population, increasing it by about a quarter in one year but also the loss of the West Bank (the most productive land) [Mazur, 1979]. On the other hand, the civil war during 1970-1971 disrupted the development efforts and created more of a burden on Jordan's economy. This particularly stopped the Arabic aid (budgetary grants) from states like Kuwait and Libya to the Jordanian government because of Jordan's actions against the Palestinian members of PLO [Piro, 1998: 62].

The Jordanian government had to meet the most turbulent times it had seen, increasing military expenditure from over 12 per cent of GNP in 1960 to a peak of almost 20 per cent in 1969 [Kanovsky, 1976: 23]. In spite of the bad situation in the Jordanian economy, GDP continued to grow, recorded at 6.5 per cent in this period, while the per capita figure remained stable due to the influx of 260 thousand from the West Bank [Mishal, *et al.*, 2001].

2.4.3 Period (1974-1983)

The saying that “Jordanian economy is the only oil economy without oil” [Al-Wazani, 1994a] is true if we understand the nature of the relationship between the economy of Jordan and Gulf countries. In spite of Jordan’s lack of oil, the oil price evolution in 1973 reflected positively on Jordan’s economy. It has enjoyed the sustained boom where GDP grew over 10 per cent per year [World Bank, 1998].

The prosperity in Jordan’s economy was a result of influxed aid and soft loans from the Gulf States, which were significant monetary transfers to the country. On the other hand, the large number of Jordanian citizens working throughout the oil producing countries provided their family, as well as their country, with another important source of income. Both the external aid and workers’ remittances constituted 58 per cent of Jordan’s GDP during the period 1974-1982 [Mishal, *et. al.*, 2001].

This period, also witnessed an expansion in the basic infrastructure, welfare services, education, health care, transportation and communication; which mainly financed by external resources. Indeed, the effect on Jordan with this sudden wealth has brought full employment and at the same time Jordan imported about 120 thousand foreign workers, to fill the gaps in the local labor markets. In addition, there were almost 300 thousand Jordanians working in the Gulf countries, especially in Saudi Arabia and Kuwait [Day, 1986: 98].

It is worth noting that most of these transfers were used to support consumption, whether it was private or public. Total consumption annual growth rate was 23 per cent of GDP during the 1973-1980 period, constituting 119.8 per cent of GDP in the same period. This expansion in consumption led to accelerated imports, which registered an annual growth rate of 28.7 per cent for the period 1973-1980. As the average share of imports in GDP during the same period was 83.3 per cent, the average share of domestic exports was 12 per cent during the same period, consequently, this gap was reflected in the trade balance deficit, which become chronic and its ratio to GDP - at factor cost - was 65 per cent in same period [MOP, 1986: 16-18]. This, in fact, represents one of the fundamental imbalances in the structure of the Jordanian economy.

2.4.4 Period (1983-1988)

The collapse of the international oil market in the 1980s caused a significant decline in the economy of the Arab oil countries. At the same time, the steep decline in oil

prices had the most dramatic effect upon Jordan's economy, particularly on the level of external aid from the oil Arab states, which fell from US\$ 1.1 billion in 1981 to less than US\$ 600 million in 1989 [Mishal, *et. al.*, 2001]. On the other hand, the wages and the supply of jobs for foreign workers had also shrunk in the oil exporting countries. Accordingly, the level of remittances sent home by Jordanian workers from abroad had dropped. The decline in oil prices also, hurt Jordanian exports to these countries, which was the main market for Jordanian exports.

On the political side, the long war between Iran and Iraq, badly affected Jordanian exports to Iraq. As a result of this war, Iraq the major trading partner with Jordan reduced its imports. Between 1983 and 1987, Jordan's real GDP growth rates declined to about 2.5 per cent [Central Bank of Jordan (CBJ), 1996]. In this environment, instead of adopting substantial budgetary cutbacks (fiscal discipline) to meet the decline of foreign aid and external flows, the government resorted to internal and external borrowing. While Jordan in the 1970s was able to cover its deficits mainly by long-term low interest loans, however, during the 1980s more of the deficits were covered by high interest commercial loans.

Thus, the government had to borrow heavily to meet its budgetary requirements as well as to compensate for the excessive decline on foreign assistance and workers' remittances. The result of these policies, of course, was a growing balance of payments deficit, declining foreign exchange reserves and a much longer and more

onerous burden of foreign debt. This debt has become intolerable, and poses extremely difficult problems for the Jordanian economy.

2.4.5 Period (1989-2001)

As the regional economies entered into a recessionary period, the flow of foreign grants from traditional regional countries and inflows of workers' remittances started to decline in the aftermath of the oil price collapse. Moreover, an important feature of the economic environment of the 1980s was the combination of high interest rates in the world market and moderate economic growth in Jordan, which resulted in the rapid growth of the debt to GDP ratio. By 1988, Jordan was on the verge of an economic crisis -the crisis and its symptoms were as follows [Mishal, *et. al.*, 2001: 32-34 and Piro, 1998: 71-72]:

- (i) GDP growth was -3.7, -16.7 in 1988 and 1989, respectively.
- (ii) Debt burden increased from US\$ 1 billion in 1980 to US\$ 8.3 billion in the end of 1988 [Al-Nabulsi, 1994: 175].
- (iii) Between US\$ 20 to US\$ 30 billion of Jordanian capital was held abroad.
- (iv) At this date, Central Bank official reserves were only US\$ 109 million.
- (v) At this date, the prices for some goods like Gasoline, Sugar and Steel Bars, and other several goods, increased from 10 per cent to 65 per cent. In general by 1989 the inflation rate had risen to 25 per cent [Milton-Edwards and Hinchcliffe, 2001: 78].

Finally, these crises lead to a devaluation of the JD by 50 per cent [Piro, 1998: 73]. Indeed, not all of Jordan's economic malaise was caused by external factors. The government response also led to deterioration in the situation. Rather than listening to the advice of foreign and local economists, who began calling for austerity measures from the early 1980s, the government followed an expansionary policy based on running down reserves and increasing foreign borrowing [Dougherty, 1988: 5].

The authorities financed the increase in government expenditure from two main sources. The first was the running down of the Central Bank's foreign reserves, which plummeted to cover of just ten days of imports. The second was borrowing from external commercial financial markets and international institutions, especially the IMF and the World Bank. Between 1985 and 1988, the government obtained credit of US\$ 262 million from the IMF and US\$ 107 million from the World Bank [The Economist Intelligence Unit (EIU), 1993: 35].

Jordan's deep economic crises forced the government to begin debt-rescheduling negotiations with the IMF. The IMF agreed to this, on condition, that the government must adopt a medium term recovery plan for the period 1989-1993, which instituted some progress towards the reduction of macroeconomic imbalances and the introduction of structural reform measures during the program period. However, the 1990 Gulf crisis suspended the IMF and the World Bank-supported program and aggravated Jordan's already serious economic problems, by increasing

the population to more than 10 per cent as a result to return of 300 thousand Jordanians from Saudi Arabia and Kuwait, raising the unemployment rate to a record high of 25 per cent² [Feiler, 1993].

These adverse developments made it impossible for Jordan to achieve the program targets. After the regional had crisis ended in 1991, the IMF again agreed to assist Jordan with a new economic reform program for the period 1992-1998, designed to gradually reduce structural problems in need of correction. A new structural program was also implemented in the period from 1999 to 2001 after the previous one had finished. The main aim of this program was to increase real economic growth by 3-4 per cent per year during the program period.

Moreover, the government has renewed its structural reform program, to cover the period 2002-2004, mainly, to enable Jordan to win debt rescheduling from the Paris club and other official creditors. In addition, this program will seek to raise the annual economic growth 6 per cent in 2004 and reduce foreign debt to 65 per cent of GDP from its current level of 80 per cent.

It is worth noting here, that the program 2002-2004 will run hand-in-hand with the government's socio-economic reform program or as it is now called, the Plan for Social and Economic Transformation (PSET). This plan aims to increase economic growth and living standards through the strengthening of structural reforms, the

continued implementation of sound macroeconomic policies, human resource development and employment creation.

2.5 The Main Features of the Jordan Economy

2.5.1 Limited Natural Resources

Jordan has a limited amount of natural resources, only 6 per cent of its land is fit for agriculture and the rest is desert or semi desert [Day, 1986: 95]. The most important natural resources are Phosphates and Potash, in addition to some other minerals such as Feldspar and Glass Sand. Moreover, Jordan faces serious problems with its water resources; with the amount of rainfall it receives being fickle. Renewable water supplies per capita are amongst the lowest in the world [World Bank, 1998].

We can argue here that although Jordan's limited resources might handicap its economic performance, however, the experience of East Asian counties (i.e. Japan, Taiwan, South Korea) prove that lacking of natural resource did not stop these counties to achieve sustainable high economic growth, and to be designated as "high-income" or "industrialized" countries. Indeed, the experiences of East Asian countries identify how international trade; good management and peaceful region can transfer poor counties, within few decades, to developed economy. In this context, it is worth noting that although resource abundance should confer an economic advantage on resource owning countries, however, empirical studies suggest that resource abundance can lead to negative development and economic growth outcomes, see for example, Atkinson and Hamilton (2003) and Auty (1994).

2.5.2 Small Economy

Jordan as a developing economy has two features, which are central to understand how macroeconomic imbalances occur and can be corrected. Firstly, Jordan is a small economy in terms of:

A) Size: in this regard, Jordan geographically and demographically is small with an area of 92.300 Sq.Km and a population of 5 million and modest per capita income US\$ 1152 in 2000 compared with an average US\$ 5600 per capita in the Arab countries [Middle East Economic Digest (MEED), 2002a]. Table (2.1) shows comparative economic indicators, comparing Jordan with some other countries in the region.

B) Economically: Jordan had been classified as small, meaning that neither its supply of exports nor its demand for imports has a noticeable impact on the world prices of these commodities and services. Economists call this country a ‘price taker’ in world markets. Therefore, the economic activity and investment atmosphere in Jordan is subject to sudden political and economic developments in the region, which makes the national economy more vulnerable than any of the other economies in the region. As noted earlier, Jordan’s economy remains extremely vulnerable to external shocks, which has been highlighted in many ways during the last four decades. Jordan also, is an open economy, in that trade and capital flow across its borders in sufficient quantities to influence the domestic economy, particularly prices and the money supply. In 2001, the trade sector (Exports and Imports) and workers’

remittances and foreign aid, constituted 80 per cent, 23 per cent and 4 per cent of GDP, respectively [CBJ, 2002].

2.5.3 A Wealth of Human Resources

Although Jordanian economy has limited natural resources, Jordanian people are amongst the most educated in the region [World Bank, 1998]. Thus, Jordan's educated and skilled labor force, gives it the opportunity to become a regional leader in businesses, especially in banking and high education. In the last three decades, Jordan has provided part of the workforce for all the Arab oil countries and has been classified as a major supplier of skilled and educated manpower in the region.

Indeed, Jordan has made significant strides in its education system in recent decades. Whereas 30 years ago, 46 per cent of the population was literate; today that number stands at more than 80 per cent [*ibid*: 12].

Jordanian development plans emphasize that education and training programs are a basic requirement for its development of human capital. Therefore, 7.3 per cent of GNP in 1996 represents the amount of public expenditure on education in Jordan, compared with 5.3 per cent in the high-income countries [MOP, 2000]. In the light of the above, it is clear that Jordan's development strategy was to develop itself as a provider of skilled manpower for Arab oil countries. Consequently, the policymaker has chosen a strategy, which will sustain its local needs and links with rich Arab countries. However, this strategy also created many problems by increasing

unemployment rates amongst university and higher education graduates, particularly in 1980s during the recession period.

2.5.4 Service Economy

The sectoral structure is one of the main aspects of the Jordanian economy. Jordan's economy is mainly service oriented. The service sector contributed around 73 per cent to GDP in 2001, as in Table (2.2), and employs 74 per cent of the labor force [DOS, 2001]. It can be seen from the table that the major contributors to the service sector are; finance, real estate and business services which accounted for 21 per cent of the GDP, followed by 20 per cent for government services in 2001.

Such a trend towards the service sector in the Jordanian economy, can be attributed to Jordan's unique and historic location at the crossroads of the Middle East, enabling it to play an important role in trade and commerce with the surrounding countries, and also, as a transit center for the region. On the other hand, the limited availability of natural resources weakens the productive sectors (will be highlighted in the following subsection) and hence gives an advantage to the service sectors.

2.5.5 Structural Weaknesses in the Productive Sectors

Jordan's economic performance was handicapped by the deficiencies of the productive sectors, which are suffering from structural imbalances. Traditionally, these sectors have experienced many difficulties and hindrances, which resulted in the stagnation of productive activities in the economy. In this regard, the total

contribution of the producing sectors was only 27.5 per cent of GDP in 2001, Table (2.2). The major productive sectors are the Agricultural, Industrial and Construction sectors, which are illustrated as follows:

(A) Agricultural Sector: the performance of the agricultural sector declined in the 1990s. Available data indicates that the contribution of this sector to GDP dropped from about 8.1 per cent of GDP in 1990 to 2.2 per cent in 2001, Table (2.2). The percentage of Jordanians employed in the agricultural sector is still modest, about 4.05 per cent in 2001 [DOS, 2001]. This fall is mainly attributed to the decline in the rainfall season, particularly the drought period in the second half of the 1990s. As a consequence, not only is agricultural output insufficient to meet the needs of the country but also, Jordan is a net importer of food and agricultural products.

In spite of the fact that Jordan is an importer of food and agricultural products, it has also, traditionally been a supplier of food, primarily fresh fruits and vegetables to regional markets. Agricultural exports represented approximately 10 per cent of Jordan's exports in 2001, Table (2.3). As renewable water supplies per capita are amongst the lowest in the world, agricultural land is very limited in Jordan.³ Thus, the problems facing the agricultural sector are illustrated mainly by the meagerness of agricultural resources, agricultural land and water, which is reflected in the instability of agricultural production due to excessive reliance on fluctuating climatic conditions.

To enhance investment and increase the value-added in the agricultural sector, the authorities offer facilities for the investors, according to Jordan's investment promotion laws, state that:

“Agricultural projects enjoy full exemption from income and social services taxes, and the inputs inputted for these projects are exempt from customs duties” [Jordan Investment Board (JIB), 2001].

In addition, the World Bank assists Jordan with Agricultural Sector Adjustment Loans to address the water supply challenge. In practice, notwithstanding these exemptions, the number of registered agricultural companies reflects the unwillingness of investors to invest in the agricultural sector. Table (2.4) shows that there were only 91 new companies with a capital of JD 14.4 million over a period of ten years; this indicator is very modest, especially if we compared it with other sectors, which will be done in the following subsections.

(B) *Industrial Sector*: Jordan's industrial sector includes manufacturing and mining. In 2001 their contribution was 19 per cent of Jordan's GDP and they also employed 13.6 per cent of the country's labor force [DOS, 2001]. As for the scope and magnitude of industrial exports (these include Crude Materials, Mineral Fuels and Machinery), as illustrated in Table (2.5), industrial exports increased from JD 552 million in 1990 to reach JD 1216.1 million in 2001 its highest level in the last ten years. Mining industries are the mainstay of Jordanian industry, which is comprised

of two main companies, Jordan Phosphate Mines Company (JPMC) and Arab Potash Company (APC).

The JPMC was incorporated in 1953 with the state owning 90 per cent of the company and the APC was established in 1956 with the government of Jordan owning 53 per cent of the company shares⁴ [Piro, 1998: 47-51]. Phosphates and Potash are Jordan's main revenue resources; their export provides an important source of revenue. In 1990 Potash and Phosphates exports together accounted for 41 per cent of Jordan's industrial exports, this share has declined to 19 per cent in 2001, Table (2.5).

The manufacturing sector has a vital role in the Jordanian economy. In the 1990s, it witnessed a remarkable increase - it contributed almost 16 per cent of GDP in 2001. Jordan's Pharmaceutical industry is one of the most successful local industries in terms of foreign currency earnings; its exports earned JD 114 million in 2001 [CBJ, 2002]. Other successful stories in Jordan's manufacturing sector are Cement Manufacturing, Petroleum Refining and Fertilizers which with (JPMC) and (APC), share approximately 40 per cent of the industrial added value [Kreishan, 1997].

The main handicaps of Jordan's industrial sector are structural cost, production quality and productivity. These factors will determine the role of the industrial sector as a growing sector in the future. To develop the industrial sector, the government offered various incentives, for instance, it has offered tax exemption to

industries, which are located outside Amman and Zarqa, the biggest cities, where most industry is presently placed. Also the incentives include the establishment of a Free Trade Zone and Qualifying Industrial Zones, which gives their products duty free access to USA markets.

Irbid Industrial Estate in the north of Jordan and Karak Industrial Estate in the south are both already attracting the interest of investors [EIU, 2001a: 29]. Available indicators on the performance of this sector in 2001, as in Table (2.6), show that 501 new industrial companies were registered with a capital of JD 23.6 million, against 446 companies with a capital of JD 25.3 million in the previous year.

(C) Construction Sector: Jordan's construction sector took the leading role in driving economic growth during the first half of 1990s, largely because of a rise in the demand for housing from about 300 thousand Jordanians returning from the Gulf countries, after the 1991 Gulf war. The indicators in Table (2.2) show that the contribution of this sector to GDP reached 8.9 per cent in 1993 and dropped dramatically to 3.5 per cent in 2001.

On the employment side, the percentage of Jordanians employed in this sector was 6.8 per cent in the year 2001 [DOS, 2001]. Available data on investment in this sector during the last decade, Table (2.7) shows 79 new construction companies in 2001 with a total capital of JD 4.2 million. Even though there was a fall in the role of this sector as percentage of GDP in the second half of 1990s, the prospects for this

sector indicate that Jordan's construction industry might achieve positive growth, considering that Jordan has one of the lowest land and construction costs in the region [Kinghussein, n.d].

2.5.6 A Chronic Balance of Trade Deficit

As previously mentioned, Jordan's economy is a small open economy. Theoretically, small countries are more dependent on foreign trade than large countries. Also, it is found that there is an inverse relationship between the size of a country and the openness proportion of its economy [Share, 1991: 107]. In practice, external trade plays an important role in the economy of Jordan. Jordan's exports and imports constituted nearly 80 per cent of GDP in 2001 [CBJ, 2002]. The country depends on imports to satisfy its needs, especially for crude oil, machinery and transport equipment.

Jordan's exports are geographically concentrated towards Arab countries, almost 40 per cent of its exports are directed towards Arab neighbors - the most important trading partners for Jordan are Iraq, Saudi Arabia and the United Arab Emirates. Other destinations of exports are India, 16 per cent of total exports (the main market for Jordanian Phosphate and Fertilizers) and the European Union (EU) 3.3 per cent. On the imports side, the EU was one of the largest single suppliers, providing JD 1063 million which constituted 33 per cent of total imports, whereas only 24 per cent came from the Arab countries [CBJ, 2000]. Jordan's balance of trade has been chronically and radically in deficit since the early days of recording trade statistics in

1936 [Share, 1991: 105]. However, Jordan's trade balance, Table (2.8), shows that the trade deficit as percent of the GDP declined from 40 per cent in 1992 to 28.9 in 2001.

The Jordanian foreign trade policy, under SAP, based on the norms of economic openness and trade liberalization. Its principal aim was to enhance Jordan's export potential. So within a short time, Jordan entered into an association agreement with the EU and signed a free trade agreement with the USA in 2001. Moreover, Jordan and the EFTA states (Iceland, Liechtenstein, Norway and Switzerland) signed a free trade agreement after joining the WTO in April 2000.

On the Arab scene, Jordan has a number of bilateral trade agreements with Arab states. It has signed agreements with Saudi Arabia for the progressive establishment of a free Trade Area, with the United Arab Emirates, and is working on an agreement with Egypt. It also has a bilateral agreement with Iraq, Lebanon, Morocco, Yemen and the Palestinian Authority [EIU, 2001a: 34]. All this development is hoped to contribute positively to boost Jordan's exports.

2.5.7 Heavy Dependency on the External World

Jordan has been recognized as a semi-rentier economy, see for example, Ryan (2002), Piro (1998) and Joffe (2002); meaning that it relies on external sources of income or rents.⁵ The main sources of its external finance can be highlighted as follows:

(A) *Workers' Remittances*: Jordan still relies on its citizens working abroad as a major source of hard currency. The figures in Table (2.9) reflect the magnitude of remittances and their importance over the last decade. The remittances increased over the period to reach JD 1426 million in 2001, but the highest rate of growth was 87 per cent in 1992. While their proportion to GDP reflects their significant effect on the economy, this proportion has amounted to an average of 18.7 per cent of GDP over the last decade. Another side of the positive effects is that workers' remittances have played a major role in financing the balance of trade. Their proportion to imports was 19.5 per cent in 1990, increased to 41.0 per cent in 2001. It is worth noting that this source of capital flows to Jordan showed in the three decades a high degree of uncertainty. This is largely drawn from having special relationships with the Gulf rich countries which has not always been the case, as has been highlighted early in this chapter.

(B) *Foreign Aid*: the story of Jordan's dependence on foreign aid started from the World Bank's mission to Jordan in 1955 to study the economy of Jordan. This mission reported that the country was heavily dependent on foreign aid [Hammad, 1987: 11-12]. During the 1940s and the 1950s, the United Kingdom (UK) was the main source of Jordan's foreign aid while the USA shared about 45 per cent of total aid in the form of technical assistance in the 1960s. After the oil price boost at the beginning of the 1970s, the flow of aid started from Arab oil countries. Between 1967 and 1985 aid received from the Arab oil states represented about 82.4 per cent of total aid received by Jordan [Khatib, 1991: 65].

The USA, the EU and Japan became the main sources of Jordan's foreign aid, after the Arab countries had stopped their aid after the 1990s Gulf war [EIU, 2001a: 35]. To examine the importance of external aid, the best way is to show its proportion to GDP. Table (2.10), shows this proportion was 6.2 per cent in 1990 recently, however, declined to almost 4 per cent in 2001, while its proportion to total revenues usually constitutes about 13 per cent of total revenues.

(C) *External Debt*: Jordan's external debt is an indicator reflecting Jordan's dependency on the external world. Historically, the UK was Jordan's main creditor country along with the USA. This situation had changed since the boom in the oil price at the beginning of the 1970s. In fact, Jordan benefited from massive transfers from oil states (soft loans) during the 1970s. However, these transfers dropped in the middle of the 1980s, therefore Jordan started to extend its foreign sources by borrowing heavily on the international market, from both the commercial banks of Europe and development funds from World Bank [Piro, 1998: 67].

Jordan's external debt has grown sharply during the 1980s to reach its peak of 189.9 per cent of GDP by 1990. As a result of the marked decline in remittances, exports and the slow down in foreign aid, the total external debt rose from 60.3 per cent of GDP in 1982 [CBJ, 1996] to 189.9 per cent in 1990 Table (2.11). But this percentage fell to 75.8 per cent in 2001 as a result of some debt forgiveness from donor community, particularly after Jordan signed the treaty of peace with Israel in 1994

and debt repayment during the SAPs period, in addition Jordan used privatization remittance to repay some of its debt.

2.5.8 High Military and National Defense Expenses

For more than four decades, the Middle East Arab countries were on the front line in recurrent wars and in a prolonged conflict with Israel. Jordan, being one of these countries, has the longest border with Israel, about 400 k.m. It was a good reason for Jordan to spend more than 10 per cent of GDP to build up military strength during the 1970s and 1980s [Maciejewski and Mansur, 1996: 21]. Jordan's military expenditure on its armed forces increased sharply to reach its record of 20 per cent of GDP in 1969, as a result of the Six Day war [Kanovsky, 1976: 22].

Recently, even after a peace treaty was signed with Israel in 1994, military and security expenses were still high, considering that the Jordanian government's ability to finance arms imports depends on military aid in the form of large grants or loans which will significantly contribute to increase Jordan's debt. It is apparent from Table (2.12) that military and national defense expenses remain stable with rates varying from 7.8 per cent to 9.7 per cent of the GDP in the last decade or so.

2.5.9 The Role of the State

The public sector in Jordan has traditionally been large, particularly since the early 1970s, when the state experienced a dramatic growth in terms of its economic and social activities and the size of employment. The state in Jordan provided society

with a wide range of services including basic services, health and education; public utilities; water, electricity, media, infrastructure support and telecommunications. Central government expenditure accounted for about 43 per cent of GDP during 1972-1994 [CBJ, 1996] and employed about 55 per cent of the labor force [DOS, 2002].

The rapid rise in oil prices in the early 1970s was the most important factor that contributed to increasing expenditure on the public sector and the state, within the Jordanian economy. Aid and grants to Jordan rose from JD 46 million in 1973 to JD 122 million in 1977. The state's role expanded in terms of expenditure magnitude and created new public institutions - as has been highlighted by El-Said (2000: 4-6):

- (i) Army expenditure on defense and security rose from JD 48 million in 1973 to JD 268 million in 1989.
- (ii) The government established the Ministry of Supply with the aim of providing people with essential food stuffs at reasonable prices and it also set and subsidized the price of nearly 40 basic items
- (iii) The Civil Consumers Corporation was also established to provide civil servants with consumer goods at cost price.
- (iv) In 1975, the Ministry of Trade and Industry was replaced the Ministry of National Economy. It began regulating and licensing all activities in the private sector.

- (vi) In 1984, the National Planning Council was replaced by the Ministry of Planning. The main concern of this ministry was creating development plans in the country - many development plans were formulated.

In addition to these key state institutions, several other institutions and ministries were also established between 1970 and 1989. The number of ministries rose from thirteen to twenty-four, and also the number of civil servants increased by more than 300 per cent over 15 years. In the period 1970-1985 the state also increased its role in the productive sectors. In the early 1990s, the government owned over 85 per cent of assets of all public services companies. In fact, state intervention influenced all aspects of people's lives and almost all Jordanians benefited from the state, either directly through employment or indirectly through subsidies. This is reflected in what King Hussein declared in 1983 that:

“It was the duty of the government to set the welfare of the people and to provide a decent standard of living for all” [*ibid*: 6].

It is worth noting that, despite the fact that Jordanian economy includes both private and public sectors, the private sector had a limited role in the economy and most of its gains have depended on the implementation of government commissioned projects or privileged relations between business and the state institutions.⁶

As the flow of foreign grants from traditional regional countries and inflows of workers' remittances started to decline in the aftermath of the oil price collapse,

associated with five years of recession between 1983 and 1987, this culminated in an economic and financial crisis at the end of 1988. At that time the authorities realized that it was a suitable time for reform in the public sector. Indeed, the new government presented in the second half of 1980s a project to promote the role of the private sector in development. This plan made an attempt to minimize market distortions by allowing market forces to determine prices and also, called for the sale of state owned shares in mixed enterprises to the private sector.

The Privatization program was an important element of the reform measures, designed to reduce government-induced distortions in the economy. However, although the government announced its plan to sell state owned shares in 1985, the first steps were taken in 1994, when the government announced a bid to sell 87 per cent of its stake in the Jordan Intercontinental Hotel. In fact, progress in privatization was slow and only began in earnest in 1998 with the sale of its 33 per cent stake in the Jordan Cement Factories Company; further progress was made in 1999 and 2000. To date almost 10 key state-held firms have been privatized and the government presently intends to privatize more key state held firms, with seven companies being readied for sale during 2001/2002 as the government sought to shore up the economy. Lately, with this rapid privatization progress, the World Bank has praised Jordan for its privatization schemes saying in a quarterly report:

“This program ranks as one of, if not the most, successful programs in the Middle East region” [World Bank, 2001: 1].

2.5.10 Socio-economic Problems

Poverty and unemployment are fundamental ongoing problems facing Jordan, particularly after the economic recession during the second half of 1980s. As a result of the Gulf war of 1991 and its aftermath, per capita real income dropped sharply through a slowdown in domestic activity. Unemployment also rose sharply, as a result of the influx of Jordanians working in neighboring Gulf countries -which represented about 10 per cent of the population. The unemployment rate, as illustrated by Table (2.13), reached its peak in 1991 at nearly 19 per cent, while in 2001 this rate declined to 14.7 per cent. However, unofficial report indicated that unemployment levels were 27 per cent at the end of 1990s⁷ [Milton- Edwards and Hinchcliffe, 2001: 87].

In addition to the above reasons for unemployment, it is worth mentioning that, despite Jordan suffering from high unemployment rates, Jordan is also, an importer of labor. Recently, the government estimates that there are about 1 million people, mainly from Egypt, Syria and Iraq [EIU, 2001a: 11] working in the agricultural and construction sectors, whereas the Jordanian jobless do not like to work in such activities.⁸

On the poverty scene, also the economic crisis in the late of 1980s and the Gulf war in 1991 had a negative effect on living standards. Per capita income fell from a peak of US\$ 2180 in 1986 to US\$ 843 in 1990 [Milton-Edwards and Hinchcliffe, 2001: 78]. Now a third of the 5 million in Jordan's population lives below the poverty line

[EIU, 2001b: 3]. Associated with the SAPs, the action taken to reduce domestic imbalances, particularly the budget deficit and price adjustments contributed to reducing real income. Indeed, one of the SAP measures was the dramatic decrease in food subsidies from its peak in 1990 of 2.5 per cent of GDP to slump to zero in 2000 and 2001 as illustrated by Table (2.14).

The government to complement the economic restructuring program and to treat the negative effects of SAPs, adopted a comprehensive social productivity package. This strategy aims at alleviating Jordan's crucial problems, poverty and unemployment. The program includes [MOP, 1993]:

- (i) Expanding the cash transfers of the National Assistance Fund (NAF) to cover more eligible beneficiaries.
- (ii) Training and rehabilitation of the unemployed.
- (iii) Providing Micro-financing for small farms in poor regions.

It is worth noting that, the dangerously rising rate of poverty and unemployment, pushed the King to direct an integrated socio-economic plan aimed at reducing unemployment and poverty in the country. The government directly announced a new executive program of social and economic transformation, mainly designed to prop up the national economy, to raise the humble per capita income and alleviate the Kingdom's twin problems, by allocating a JD 300 million extra budgetary spending program for 2002-2005 [EIU, 2001b].

2.6 Conclusion

Jordan has been recognized as a small open economy with limited natural resources and high population growth rates. These factors made Jordan extremely dependent on foreign aid and workers' remittances, leaving the national economy extremely vulnerable to external political and economic developments in the region, which has been highlighted in a number of ways during the last five decades. Jordan's major balance of payments crisis of 1988/1989 and the onerous burden of foreign debt was understood to be the cumulated outcome of changing of international economy combined with mismanagement of the local economy by the government.

Since 1989, Jordan has embarked on a program of macroeconomic adjustment and market reform, that is designed to restore economic growth through re-establishing fiscal and monetary stability as well as reducing the state's economic influences and boosting the private sector. From what preceded, one can conclude that the effective improvement in the regional political climate and the liberalization of the economy under structural adjustment program are seen now as the essential means by which Jordan can attract investment and progressively shift from rent-seeking to more efficient economy as a long-term objective.

Table (2.1)
Comparative Economic Indicators (1999)

	(US\$ billion)			
	Jordan	Lebanon	Egypt	Israel
GDP	7.5	16.6	89.0	100.8
GDP per capita	1.152	5.039	1.324	16.472
Current account balance	0.4	-2.3	-1.7	-1.9
Exports of goods	1.8	0.7	5.2	25.6
Imports of goods	3.3	6.2	15.2	30.0

Source: The Economic Intelligence Unit (2001a) “Country Profile: Jordan”.

Table (2.2)
The Relative Importance of Economic Sectors to GDP (Factor Cost), (1990-2001)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Agriculture	8.1	8.5	8.3	6.0	5.4	4.4	3.8	3.3	3.0	2.4	2.2	2.2
Miningand Quarrying	6.4	5.0	4.4	3.3	2.9	4.1	3.6	3.8	3.6	3.6	3.3	3.2
Manufacturing	14.9	13.7	13.7	13.3	15.8	14.9	13.5	13.8	15.2	15.7	15.6	15.9
Electricity and Water	2.3	2.5	2.2	2.6	2.4	2.5	2.5	2.6	2.5	2.6	2.5	2.6
Construction	4.5	5.0	7.3	8.9	8.4	7.7	6.0	5.0	4.1	3.7	3.4	3.5
Total Commodity Producing Sectors	36.2	34.7	35.9	34.1	34.9	33.6	30.0	28.5	28.4	28.1	28.2	27.5
Trade, Restaurants And Hotels	9.3	10.2	9.4	9.9	10.6	10.7	11.7	12.9	12.8	12.7	13.4	13.5
Transport and Communications	15.6	15.3	15.2	12.6	14.6	14.8	15.3	14.9	15.1	14.9	15.2	15.8
Finance, Real Estate and Business Services	17.5	18.8	17.6	19.4	18.6	18.6	20.9	20.4	20.6	20.9	21.6	21.4
Producers of Government Services	19.3	18.9	18.7	19.3	18.8	19.5	19.6	19.9	19.8	20.4	20.0	19.6
Other Service	3.8	4.2	4.5	4.2	6.4	4.8	4.8	5.2	4.9	5.6	5.8	2.2
Total Services	63.8	65.3	64.1	64.3	66.1	66.5	70.5	71.5	71.6	71.9	72.9	72.5

Source: CBJ (1990-2001) “Monthly Statistical Bulletin “

“Researcher Calculations”

Table (2.3)
Agricultural Imports and Exports (1990-2001)
(JD Million)

	Agricultural Imports	Agricultural Imports As Percent of Total Imports	Agricultural Exports	Agricultural Exports As Percent of Total Exports
1990	403.9	23.4	59.8	9.8
1991	417.7	24.4	86.0	14.4
1992	416.0	18.8	92.0	14.5
1993	435.1	17.7	140.0	20.3
1994	409.7	17.3	91.2	11.5
1995	419.2	16.2	99.5	10.0
1996	685.9	22.5	160.1	15.4
1997	539.6	18.6	181.3	17.0
1998	532.2	20.0	165.0	15.8
1999	484.1	18.4	127.4	12.1
2000	529.9	16.3	116.4	10.8
2001	519.8	15.1	135.6	10.0

Source: CBJ (1990-2001) “Monthly Statistical Bulletin” “Researcher Calculations”

Table (2.4)
Development of Agricultural Investment (1990-2001)

	Number of Registered Agricultural Companies	Capital (JD Million)
1990	8	0.2
1991	17	0.4
1992	19	1.6
1993	21	2.5
1994	10	0.5
1995	8	4.1
1996	1	4.0
1997	0	0
1998	0	0
1999	0	0
2000	0	0
2001	7	1.1

Source: CBJ (1990-2001) “Annual Report”

Table (2.5)
Development of Industrial Exports (1990-2001)*
(JD Million)

	Industrial Exports	Phosphate and Potash Exports	Phosphate And Potash Exports As percent of Total Industrial Exports
1990	552.5	227	41.1
1991	512.6	219	42.9
1992	542.0	209	38.6
1993	557.0	184	33.0
1994	703.0	193	27.5
1995	905.0	228	25.2
1996	879.7	253	28.8
1997	885.8	234	26.4
1998	881.3	252	28.6
1999	924.0	241	26.1
2000	963.4	229	23.4
2001	1216.1	230.9	19.0

Source: CBJ (1990-2001) “Monthly Statistical Bulletin” “Researcher Calculations”

* Industrial Exports = (Total Exports – Agricultural Exports), so it includes: Crude Materials, Mineral Fuels, Chemicals Manufactured Goods, Machinery and Transport Equipment and other items.

Table (2.6)
Development of Industrial Investment (1990-2001)

	Number of Registered Industrial Companies	Capital (JD Million)
1990	488	16.7
1991	710	46.5
1992	813	101.0
1993	665	122.3
1994	648	182.2
1995	533	155.2
1996	301	28.5
1997	306	50.1
1998	387	24.0
1999	400	28.0
2000	446	25.3
2001	501	23.6

Source: CBJ (1990-2001) “Annual Report”.

Table (2.7)
Development of Construction Investment (1990-2001)

	Number of Registered Construction Companies	Capital (JD Million)
1990	49	1.5
1991	126	4.8
1992	177	8.2
1993	140	8.1
1994	145	11.1
1995	155	12.5
1996	68	5.3
1997	61	3.3
1998	75	5.6
1999	82	4.9
2000	85	7.3
2001	79	4.2

Source: CBJ (1990-2001) “Annual Report”

Table (2.8)
The Trade Balance of Jordan (1990-2001)

	(JD Million)					
	Total Exports	Exports (%) Growth Rates	Total Imports	Imports (%) Growth Rates	Trade Deficit	Trade Deficit As percent of GDP
1990	706.1	11.6	1714.8	39.4	-1008.7	-37.8
1991	770.7	9.1	1764.8	2.9	-994.1	-34.8
1992	829.3	7.6	2291.0	29.8	-1461.7	-40.0
1993	864.7	4.2	2449.9	6.9	-1580.2	-41.7
1994	995.2	15.1	2357.6	-3.6	-1362.4	-32.6
1995	1241.1	24.7	2588.2	9.8	-1347.1	-29.2
1996	1288.2	3.7	3041.6	17.5	-1753.4	-37.3
1997	1301.4	1.0	2906.9	-4.4	-1605.5	-31.3
1998	1277.9	-1.8	2712.4	-6.7	-1434.5	-25.6
1999	1298.8	1.6	2622.5	-3.3	-1323.7	-23.2
2000	1345.3	3.6	3203.9	22.2	-1858.6	-31.9
2001	1625.6	20.8	3434.5	7.2	-1808.9	-28.9

Source: CBJ (1990-2001) "Annual Report"

"Researcher calculation"

Table (2.9)
Development of Jordanian Workers' Remittances (1990-2001)

	(JD Million)			
	Workers' Remittances	Remittances (%) Growth Rates	Remittances as percent of GDP	Remittances as Percent of Imports
1990	331.8	--	12.4	19.4
1991	306.3	-7.7	10.7	17.4
1992	573.1	87.1	16.4	25.0
1993	720.7	25.8	18.7	29.4
1994	763.7	6.0	18.0	33.7
1995	871.7	14.1	19.1	33.6
1996	1094.8	25.6	22.0	36.0
1997	1173.5	7.22	22.6	40.4
1998	1093.8	6.8	19.4	40.3
1999	1179.8	7.9	20.6	45.0
2000	1308.2	10.9	22.1	40.6
2001	1426.0	9.0	22.8	41.5

Source: CBJ (1990-2001) "Annual Report"

"Researcher calculation"

Table (2.10)
Foreign Grants and their Proportion to Total Revenues
and GDP (1990-2001)

	(JD Million)			
	Total Revenues and Foreign Grants	Foreign Grants	Foreign Grants as Percent of Total Revenues	Foreign Grants As Percent of GDP
1990	938.0	164.3	17.5	6.2
1991	1112.0	225.2	20.3	7.9
1992	1358.7	137.4	10.1	3.9
1993	1406.3	163.2	11.6	4.2
1994	1421.9	175.5	12.3	4.1
1995	1620.6	169.7	10.5	3.7
1996	1677.1	247.0	14.7	5.0
1997	1574.9	205.0	13.0	3.9
1998	1699.5	203.0	12.0	3.6
1999	1783.8	198.5	11.1	3.5
2000	1804.7	238.8	13.2	4.0
2001	1885.1	247.0	13.1	3.9

Source: CBJ (1990-2001) "Monthly Statistical Bulletin" "Researcher calculation"

Table (2.11)
Selected External Public Debt Indicators (1990-2001)

	(JD Million)		
	Outstanding External Debt	Ratio to GDP	Debt Service Ratio Commitment*
1990	5064.3	189.9	43.2
1991	4958.6	173.7	41.1
1992	4577.6	131.1	39.5
1993	4229.6	108.1	35.1
1994	3914.8	91.8	29.1
1995	4465.9	97.9	26.4
1996	4722.8	94.8	25.9
1997	4580.6	88.2	24.1
1998	5009.8	88.7	21.9
1999	5186.2	90.6	22.0
2000	4794.7	81.1	20.7
2001	4742.8	75.8	20.7

Source: CBJ (1990-2001) "Annual Report" "Researcher calculation"

** Represents the ratio of payments due (principal + interest) to total exports of and Non-factor service.*

Table (2.12)
Defense Expenditure and its Proportion to Total Expenditures
and GDP (1990-2001)

	Total Expenditures	Defense Expenditure	Defense Expenditure As Percent of Total Expenditures	Defense Expenditure As Percent of GDP
				(JD Million)
1990	1120.0	263.2	23.5	9.5
1991	1234.2	278.5	22.6	9.4
1992	1348.7	282.0	20.9	7.8
1993	1647.3	310.2	18.8	8.4
1994	1504.2	348.2	23.1	8.2
1995	1697.5	389.9	23.0	8.5
1996	1717.9	417.2	24.3	8.9
1997	1906.1	444.5	23.3	9.0
1998	2055.1	491.0	23.9	9.5
1999	2007.4	512.1	25.5	9.7
2000	2004.6	530.5	26.5	9.0
2001	2075.5	537.2	26.8	8.6

Source: CBJ (1990-2001) “Monthly Statistical Bulletin” “Researcher calculation”

Table (2.13)
Unemployment Rate (1990-2001)

	Unemployment Rate
1990	16.8
1991	18.8
1992	18.0
1993	18.6
1994	15.8
1995	15.3
1996	13.0
1997	14.4
1998	12.6
1999	14.4
2000	14.1
2001	14.7

Source: DOS “Employment and Unemployment Survey” various issues.

Table (2.14)
Food Subsidies and Their Proportion
to GDP (1990-2001)

		(JD Million)
	Food Subsidies	Food Subsidies AS Percent Of GDP
1990	63	2.5
1991	69	2.4
1992	53	1.5
1993	54	1.4
1994	43	1.0
1995	64	1.4
1996	30	0.6
1997	71	1.4
1998	38	0.7
1999	15	0.3
2000	0	0
2001	0	0

Source: CBJ (1990-2001) “Annual Report”
“Researcher calculations”

Endnotes

- ¹ Jordan became a member of the United Nations on December 1955.
- ² The United Nations considered Jordan as most country had hurt as a result of Gulf war after Iraq and Kuwait. See ESCWA (1991: 5).
- ³ According to the World Bank, per capita water supply in Jordan is among the lowest in the world, and is falling rapidly as population rises. By 2025, it will be 17 per cent of its level in 1960 [World Bank, 1998].
- ⁴ The government announced that there is a plan to sell its shares in these companies as part of the privatization program, under the SAP recommendations.
- ⁵ There is an enormous literature now on the concept of the rentier state. See for instance, Hazem Beblawi and Giacomo Luciani, (eds.) (1987).
- ⁶ For more details regarding state-business relations in Jordan, see Carroll (2003).
- ⁷ The independent estimate of unemployment was the result of 1997 study by the university of Jordan's Center for Strategic Studies. One possible explanation of the difference can be accounted for the different measurement techniques.
- ⁸ Most of the Non-Jordanian workers in Jordan doing jobs that Jordanians refuse to take, mainly physically demanding jobs, Jordanian prefer jobs in the public sectors. These phenomena, however, explained in Jordan as "Culture of Shame". The degree to which Jordan's "Culture of Shame" contributes to unemployment is debated in the country.

CHAPTER THREE

STRUCTURAL ADJUSTMENT PROGRAM:

OBJECTIVES AND INSTRUMENTS

3.1 Introduction

After the collapse of the Soviet Union in 1991 and end of the era of development planning, a new development approach emerged which became known as the Washington consensus.¹ Its elements included macroeconomic stability, microeconomic liberalization and openness. This model of development was promoted by the World Bank and the IMF through conditionality in the 1980s [Bird, 2001: 33]. The World Bank and the IMF intervention through the Structural Adjustment Program (SAP), tried essentially to achieve the desired goals of macroeconomic adjustment in developing countries, by imposing very particular model of development and a tight set of economic instruments.

The adoption of the World Bank and the IMF policy was seen as the key for achieving the development objectives in the Third World, by generating rapid and sustained economic growth. However, the IMF and the World Bank package became a controversial issue, especially in the last decade after the liberalization process created problems such as increasing income disparities leading to social and political instability.

The need for macroeconomic adjustment essentially arises when a country has a fundamental imbalance between aggregate demand and aggregate supply. These imbalances could be generated by exogenous shocks, such as adverse changes in the terms of trade or natural events. Disequilibria could also be generated due to distortions on account of unsustainable domestic policies. Whatever the underlying reasons for this demand-supply imbalance, in principle, a country can delay adjustment by borrowing from abroad and consequently, the dis-equilibrium in the economy can be made to persist for an extended period. There are, however, severe economic costs involved with such a strategy that are well known. These include overvaluation of the domestic currency leading to unsustainable reserve depletion, increasing inflation, reduced economic growth and loss of international competitiveness leading to a widening current account deficit as well as higher foreign debt.

In these circumstances, SAP must be aimed at meeting the country's principle macroeconomic objectives. Indeed, the fundamental objectives of a structural adjustment program are to provide for an orderly elimination of the imbalance between aggregate domestic demand and resource availability. Consequently, to achieve these objectives, the adjustment program has necessarily included a variety of policies that simultaneously reduce aggregate demand and increase the availability of total resources. These policies typically include monetary and fiscal instruments designed to affect the aggregate level of demand relative to production. On the other hand, there are other policies to improve international competitiveness and expand

the supply of tradable goods through both reduced consumption and increased production and this principally involves devaluation.

The purpose of this chapter is to describe theoretically and empirically how these instruments can be expected to affect the targets towards which they are directed and thereby achieve the goal of macroeconomic adjustment. Based on the main links between policy instruments and SAP objectives, the chapter suggests the main features of the econometric models, which will be used for estimation purposes. However, first of all, the background of SAP will be illustrated briefly in the following section.

3.2 A Historical Background of SAP

The experience of structural adjustment policy should be seen against the background of its causes, the oil price shocks of 1970s and the subsequent debt crisis. The aftershocks have manifested themselves in a variety of ways, most notably in a global tendency towards recession and unemployment, rising debt levels, low and declining primary commodity prices and balance of payments deficits [Dixon, *et. al.* 1994: 2].

Table (3.1) offers a picture of the oil prices growth rates and current account deficits for industrial countries, oil-exporting developing countries and oil-importing developing countries, during the period 1973-1982. Developing countries in order to maintain the development process, responded to the serious current account deficits

Table (3.1)
The Effect of Oil Shocks of the 1970s on Developed
and Developing Countries

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Oil prices (US\$/barrel)	2.7	9.8	10.7	11.6	12.4	12.7	17.0	28.7	32.6	33.5
Industrial Countries										
Growth rate (%)	5.59	0.02	-1.1	4.4	3.42	5.52	2.51	0.97	1.49	-1.2
Current account (US\$ billion)	20	-11	20	1	-2	33	-6	-40	1	-1
Oil-exporting Countries										
Growth rate (%)	6.4	5.3	-1.3	5.9	1.5	-3.6	4.0	-5.0	-4.6	1.93
Current account (US\$ billion)	7	68	35	40	30	2	69	114	65	-2
Oil-importing Countries										
Growth rate (%)	4.3	3.8	2.9	3.2	4.1	3.1	2.2	3.3	1.5	-2.1
Current account (US\$ billion)	-11	-37	-46	-31	-29	-41	-61	-89	-108	-87

Source: Gilbert and Vines (eds.) (2000).

of US\$ 108 billion in 1981 by borrowing in most cases from international capital markets.² On the other hand, the behavior of the world economy during the early 1980s in particular, the high interest rates, the fall of developing countries' exports and the sluggish growth of the industrial countries played an important role in exacerbating the crisis in most developing countries.³

Since the situation was so bad, most developing countries were forced to deal with these deficits by borrowing rather than by following deflationary policies and reducing their imports. Commercial banks responded with an enormous increase in lending between 1975 and 1982. Consequently, the developing world's long-term foreign debt more than tripled, growing from US\$ 162.5 billion to US\$ 551.2 billion.

By the late 1980s, indebtedness had become a major problem in one country after another, particularly after Mexico's announcement in 1982 that it was facing serious financial difficulties. In spite of significant efforts to adjust by some countries, the financing gap has been closed mainly after the involvement of the IMF and the World Bank who provided packages of funds [Edwards, 1989]. This pattern was repeated over and over again in the following years, as other countries found themselves in similar situations to Mexico. Indebted countries in order to cope with their debts, had to agree to impose an orthodox IMF and World Bank stabilization and adjustment program in order to reschedule their debt or borrow more money.

By the middle of the 1980s, SAP had taken over as the main tool for correcting macroeconomic imbalances such as balance of payments deficits and national budgets deficits, which were seen as a handicaps to sustained economic growth [Zack-Williams, *et. al.*, 2000: 4]. By the end of the 1990s, many countries around the world had applied similar packages, from Africa to Asia, Latin America, Eastern Europe and the Middle East.

Historically, the World Bank created structural lending programs in the early 1980s as one of several responses by the Bank to encourage reforms and to alleviate the pressure of the growing payments difficulties facing many developing countries. The World Bank outlined its first proposal for structural adjustment lending in its annual meeting in Belgrade in 1979. The objective was to provide support for member countries with serious BOP difficulties.

Any countries, despite significant differences in their economic circumstances, wishing to qualify for such lending were required to adopt specific changes in their policies to enable their economies to adapt over a reasonable period to the changes in the international environment, without sacrificing their long-term growth objectives [Wright, 1980]. However, the World Bank approach was mirrored by the IMF and many other bilateral lenders. For all of these donors, structural adjustment loans were closely tied to medium term adjustment programs with conditions that stipulated policies and institutional changes. The Bank adjustment program placed

the emphasis on a country's supply capacity, whereas the IMF's program concentrated on demand management, as will be explained in the next section.

3.3 Definition of Structural Adjustment Program

There are several reasons for macroeconomic disequilibria, but fundamentally they arise whenever imbalances persist between aggregate demand and aggregate supply. External shocks / internal shocks or in many cases both may generate these imbalances. Exogenous shocks include negative changes in the terms of trade or natural disasters, whereas internal shocks could be generated due to political breakdown, national or regional conflict or perhaps unstable domestic policies [Toye, 1994].

Most of the developing countries experienced problems as a result of the two oil price shocks of 1973 and 1979 and the debt crises in the 1980s, which was reflected in balance of payments deficits, budget deficits and high rates of inflation. In response to this situation, the IMF and the World Bank advocated SAPs as a policy response to help developing countries to improve macroeconomic stability and to pay back their debt.

The word "adjustment" during the 1970s and the 1980s usually referred to balance of payments adjustment; however, by the 1990s the meaning had changed to signify something quite different [Holsen, 1991]. The term structural adjustment has come to have more distinct usage, referring to the specific sets of economic policies, linked

to the conditional loans from the IMF and the World Bank to developing countries.

With regard to this, Ankie Hoogvelt (1997: 167) defined SAPs as:

“The generic term used to describe a package of measures which the IMF, the World Bank and individual western aid donors have persuaded many developing countries to adopt during the 1980s, in return for a new wave of loans.”

However, in recent years, the IMF and World Bank, in addition to their concern about BOP adjustment, have also given increased emphasis to prospects of economic growth and income distribution. They are now more interested in social welfare when designing and implementing their development programs. According to Rao and Nallari (2001: 3) adjustment is now seen as follows:

“An ongoing process with reforms impacting upon all aspects of economic life, including not only sustainable development and poverty reduction but also, a major shift in the economic systems of developing countries towards a market-friendly orientation.”

To do so, the IMF and the World Bank packages have involved a combination of macroeconomic adjustment (stabilization), imposed by the IMF as short-run measures, to restrain aggregate demand. On the other hand, the packages also include the World Bank's structural adjustment, designed to deal with the supply side of the economy for long-term structural reforms. In other words, SAP has come to represent a large range of policy reforms, macroeconomic, microeconomic and sectoral policies aimed at improving resource allocation and increased economic

efficiency. Figure (3.1) represents the main instruments of structural adjustment program.

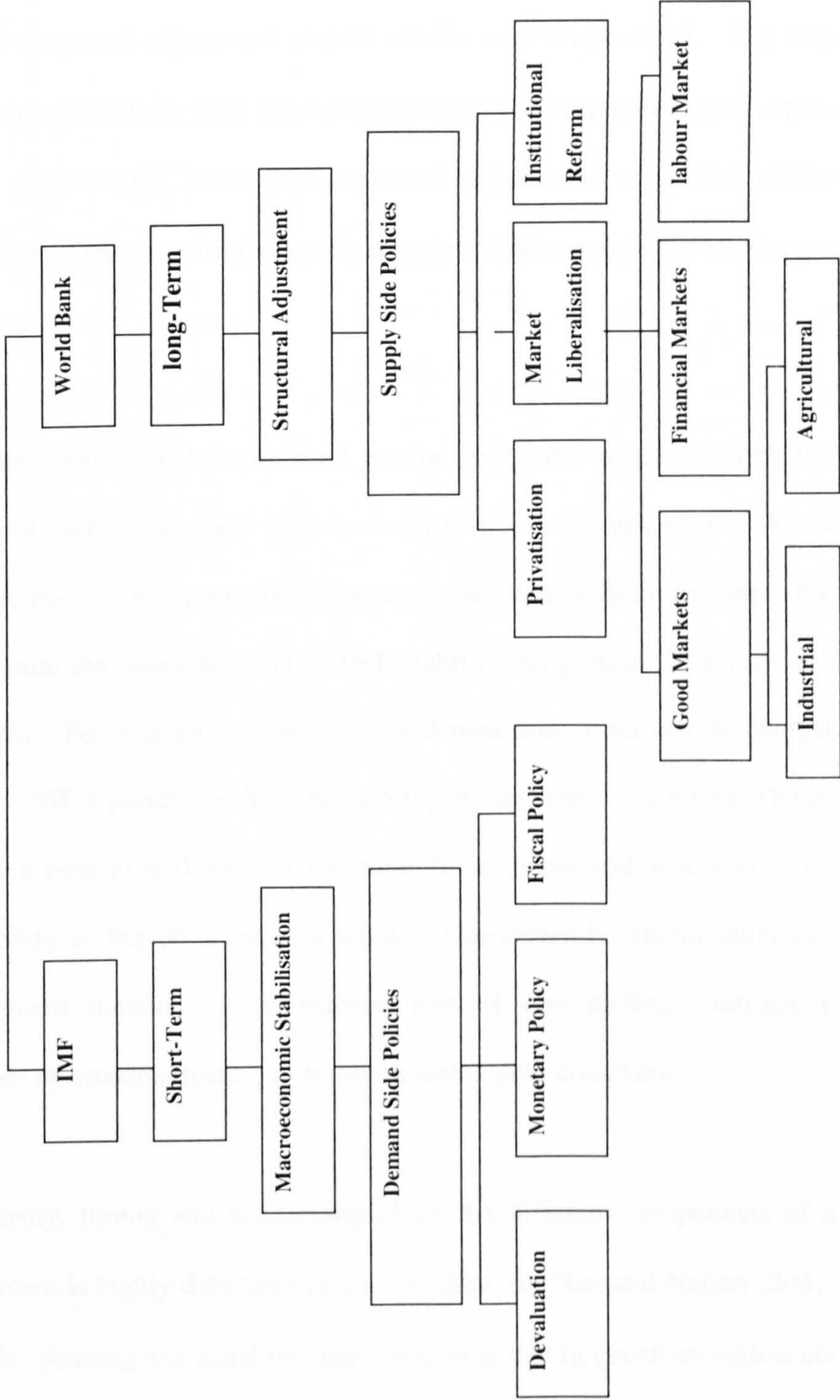
IMF stabilization policy (Demand Management Policies) is used to achieve external and internal balance, internal balance means that the aggregate expenditure of the economy is matched by output at stable prices, and external balance means that the current account is met by a sustainable capital net inflow. Typically the IMF stabilization program includes: expenditure reduction, which includes measures to reduce the public sector deficit and domestic credit. However, expenditure reduction must be accompanied by expenditure switching measures in order to reduce the prices of non-tradables relative to tradables and, consequently, encourage the production of tradables, such policies, includes devaluation, taxes and subsidy reforms.⁴

The World Bank structural adjustment (Supply Side Policies) that might be used in an attempt to develop the growth potential of the economy by improving the efficiency with which capital, labor and other factors of production are allocated among competing markets. It extends over a long period of time, usually 3-5 years and includes policies, such as market liberalization and privatization. World Bank structural adjustment, in contrast to the IMF policies, requires the contribution of thousands of people across many agencies in the economy. This is because changing the structure of an economy takes a longer time to achieve, as well as more effort.

Figure (3.1)

A Schematic Representation of Structural Adjustment Program

Structural Adjustment Program



It is worth noting that despite the difference between IMF stabilization and World Bank adjustment, both the IMF and World Bank argue that the distinction between stabilization and structural adjustment should not be over emphasized. The two programs are complementary to each other and not completely separate [Silva Lopes, 1989: 22]. In other words, successful structural adjustment requires a stable macroeconomic environment and stabilization is easier when economic structures are sound.

Many other studies suggest that the demand management side, as promoted by the IMF, is an integral part of structural adjustment, which is promoted by the World Bank. Therefore, the two sides are complementary, and it is difficult to isolate the structural effect from the possible effect of IMF stabilization policies [Harrigan and Mosley, 1991: 78]. For example, temporary fiscal measures to reduce the budget deficit (short-run IMF's policy) without an accompanying sound tax reform (long-run World Bank's policy) will lead to recurrent fiscal crises and will eventually affect the credibility of the program as a whole. Consequently, stabilization and structural adjustment measures have become part of one package, ultimately intended to restore macroeconomic equilibrium in developing countries.

Indeed, the intensity, timing and sequencing of all the different components of a structural adjustment is highly debatable in the literature, see Rao and Nallari (2001: 9-13). Generally speaking, the usual recommendation is that in countries with acute macroeconomic problems, the structural reforms should be undertaken only after

sufficient progress has been made in reducing the macroeconomic imbalances. In this sense the sequencing of SAPs requires stabilization and then structural adjustment.

However, some potentially serious conflicts may arise in trying to achieve both objectives at the same time. For instance, many times there will be an important trade-off between a trade liberalization policy that reduces import tariffs and the achievement of fiscal balance. In many developing nations, governments use tariff proceeds extensively to finance their expenditures, and if such policies call for the removal of import taxes, this may seriously reduce government revenues making fiscal balance harder to achieve, and potentially leading to the expansion of government deficits. On the other hand, restraints on government spending and falling revenues have been associated with a halt in government investment, which has led to deterioration in the country's infrastructure and perhaps diminishing private sector investment.

Theoretically, the policy measures embedded in these programs are undoubtedly based on the neo-liberal economic theory that assumes automatic market adjustments towards full equilibrium. Policies like fiscal and monetary restraints are expected to reduce aggregate demand, balance of payment deficits and inflation, whereas devaluation is expected to increase the prices of tradables relative to nontradables and promote export and import substitutes. Liberalization is expected to improve the

efficiency of resource allocation and thereby increase aggregate output, and financial liberalization is expected to increase savings and investments.

Practically, the SAPs have been the main method for helping the neo-liberal theory to be put into practice through its policies in the real world. This was especially true in the case in the early of 1980s, when the old orthodoxy began to lose its popularity compared to the revived neo-liberal ideas. In fact, there were many factors that contributed to the spread of the neo-liberal paradigm. These can be summarized as follows [Toye, 1993]:

- (i) The collapse of the “Socialist Bloc” and its alternative strategies for development in Eastern Europe.
- (ii) The failure of Keynesian interventionist policies.
- (iii) A series of economic crises throughout the world.
- (iv) The spread of globalization.

Kiely (1998: 31) argued that the New Right ideas, such as Margaret Thatcher’s in Britain and Ronald Reagan’s in America, reinforced the neo-liberal reforms both nationally and internationally. As the neo-liberal view is based on a critique of the old orthodoxy, the main aim of the neo-liberal theories is to emphasize market forces as the main instruments for allocating resources and reducing the role of government. In order to achieve these aims, the neo-liberal thinkers aim at privatizing state-owned enterprises, encouraging foreign investment by creating greater hospitality for

foreign investment and a general opening up of the economy to international commerce, thereby encouraging both economic growth and economic efficiency [Todaro, 1997: 86-88].

In the light of the above, it is not surprising that the IMF and World Bank structural adjustment policies are designed on the basis of neo-liberal theory, and on the belief that market forces are superior to state planning and intervention for resource allocation and output distribution. At this point, the question arises, how is this theory put into practice in many countries in the world? An attempt to answer this question is made in the next sections.

3.4 Macroeconomic Adjustment: A Policy Perspective

As discussed earlier, the IMF and the World Bank approach shows that the typical candidate for a structural adjustment program has a large external deficit, a large fiscal deficit and often a high inflation rate. The external deficits arise from a larger external debt, an overvalued currency and excessive fiscal deficits. The fiscal deficits come from large government sectors and high goods subsidies. The inflation stems in part from a fiscal deficit financed initially by borrowing from abroad or by money creation. In these circumstances, structural adjustment must be aimed at meeting the country's principle macroeconomic objectives. Consequently, SAPs combine stabilization with structural adjustment. The stabilization policies limit money and credit growth, reduce the fiscal deficit, and implement a real devaluation.

The structural adjustment policies increase the efficiency of the economy through privatization and liberalization, along with currency devaluation.

Generally speaking, in a program, aims at growth oriented adjustment, long term macroeconomic adjustment would involve elements of both demand management policies as well as supply side policies. While an attempt is made here to cover the main links between policy instruments and SAPs as the ultimate objective, this section does not deal with all the possible effects of macroeconomic policy measures. The main elements of SAPs will be explained in the following sections.

3.4.1 Specification of Monetary Policy

The emphasis on monetary considerations in the analysis of external balance problems is called the monetary approach to the BOP. The monetary approach has been used extensively by the IMF in its analysis and design of SAPs for countries in balance of payments trouble. The model was originally developed by Polak in 1957, which suggests explicit links between the external balance and the monetary side, with the objective of arriving at a formal relationship between the domestic component of the money stock and changes in international reserves.

Polak's results were powerful and continue to form the theoretical basis of the IMF packages [Tarp, 1993]. Polak's model was specified in nominal terms and, consequently, no explicit distinction was made between nominal and real income

changes. The main behavioral assumptions of this model as briefly stated in Rao and Nallari (2001: 71-77) include:

1. The demand for money (Md) depends on nominal income (Y) with the income velocity of money (v) being assumed to be a constant as follows:

$$Md = vY \dots(1)$$

2. Imports (M) are a constant fraction (m) of nominal income (Y) that is:

$$M = mY \dots(2)$$

3. The money supply (Ms) is endogenously determined through the identity of monetary balance as the sum of domestic credit (DC) and international reserves (R) of the domestic banking system as follows⁵:

$$\Delta Ms = \Delta R + \Delta DC \dots(3)$$

4. The (BOP) identity links changes in international reserves (ΔR) with the current account ($X-M$) and changes in capital inflows (ΔF) as follows:

$$\Delta R = (X-M) + \Delta F \dots(4)$$

5. Finally, Polak assumed that there is equilibrium in the money market as follows:

$$\Delta Md = \Delta Ms \dots(5)$$

Polak, used the above model to reach a conclusion regarding the effects of changes in the policy variable, domestic credit (ΔDC), on the target variable, international reserves (ΔR). On the above basis, assuming that X and F are given exogenously, the transmission mechanism through which an increase in (ΔDC) works is firstly to

increase (MS), equation (3). This brings an increase in money demand, given equation (5) and, consequently, nominal income increases, equation (1). This increase in nominal income increases imports through equation (2), and, consequently, the (BOP) deteriorates given equation (4), with a resulting fall in international reserves. The above process will continue in standard fashion and it can be shown that the initial expansion in money supply through the increase in domestic credit is eventually offset by the depletion in international reserves.⁶ Thus, the Polak model focused on the links between changes in domestic money supply and changes in the external accounts.

Practically, in order to develop a monetary type of approach to structural adjustment packages, the first step is to decide on a BOP target ΔR^* , then the IMF by knowing how much of deficit the country can afford, then can suggest policies to make the projected deficit no larger (based on the availability of loans and credit from abroad and the possibility of drawings from existing reserves). The next step is to predict how much the demand for money in the country will increase ΔMd^7 . Now given ΔR^* and ΔMd^* the policy's conclusion is that improving the external BOP implies domestic credit restraint, so accordingly, a good external performance depends on controlling domestic credit expansion [Dornbusch, *et. al.*, 2001: 470-474].

As is now apparent, the IMF places such great emphasis on controlling domestic credit expansion in a country under SAPs. However, the IMF model does not provide analysis of the impact of external factors (such as a deterioration in the terms

of trade) in relation to BOP performance, and instead finds a direct and causal relationship between excessive credit creation and deterioration of the external accounts.

According to Zaki (2001), the IMF staffs justify this monetary approach to the balance of payments for two main reasons. Firstly, as is often the case in developing countries, the reasons for balance of payment difficulties are directly linked to monetary phenomena (expansionary monetary policy) it also could be a sharp drop in capital inflows or capital outflows. Therefore, under these circumstances, the reserve losses tempted the central bank to sterilize these losses by allowing net domestic credit to grow at an even faster rate. Thus the best way to protect the balance of payments from excessive money creation is by having a ceiling on domestic credit. Secondly, monetary data is the most accurate and available in both developed and developing countries and thus is made to play a crucial role in the performance criteria that allow the IMF staff to determine whether the program conditions are met.

The theoretical and empirical literature on the effect of changes in the rate of domestic credit expansion on macroeconomic indicators is still a matter of controversy. The simple version of the monetary approach to the BOP suggests that in a small open economy operating under a fixed exchange rate regime, a reduction in domestic credit will be offset by international reserve flows -due to a rise in interest rates- that will restore the money stock to the level desired by the public.⁸

Consequently, this policy would have no long run effects on output [Khan and Knight, 1985]. In short, this model suggests that under fixed exchange rates, the money supply adjusts to money demand through international flows of money via balance of payments imbalances, of course such analyses assume closely integrated markets and a perfect capital mobility.

Indeed, most efforts by developing countries to promote economic development, through controlling interest rates and directing credit to priority sectors, have undermined financial development. Interest rate controls discouraged savers from holding domestic financial assets and discouraged institutions from lending longer term.⁹ This lack of money and capital markets has limited the effectiveness of monetary policy in such countries [Tahir, 1997a]. On the other hand, while the IMF's programs stress the importance of the monetary authorities ability to control money and credit, according to Zaki (2001) there is a large body of evidence indicates the instability of money demand in most developing countries as well as the difficulty of controlling the money supply in the environment of a highly underdeveloped financial system.

Considering what has been said, the success of such a policy is a condition of the ability of the monetary authorities to control money expansion, by using effective monetary instruments, without any contractionary effects on output. Whereas in developing countries control over bank credit is the main instrument used to control money expansion.¹⁰ At the same time in these countries, bank credit is the major

means of financing public expenditure. Therefore, the effects of a contractionary monetary policy (defined as a reduction in the growth of either domestic credit or the money supply) on output needs to be tested empirically. In general, the evidence on the effect of changes in the rate of domestic credit on the BOP shows that credit expansion in several developing countries was reduced and the overall balance of payments improved substantially. These results were achieved at the cost of a relatively modest reduction in the average growth rate of output during the program period [Gylfason, 1987: 30].

A study by Doroodian (1993) on 43 developing countries, of which 27 are program countries, shows that decreases in money growth can have a significant and favorable effect on the current account. Most empirical results reviewed by Khan and Knight (1985) confirm the hypothesis that a monetary contraction does indeed tend to exert a deflationary effect on domestic output in the short run.

It seems that the effect of contractionary monetary policy improves the external imbalances but at the cost of a reduction in economic growth only in the short run, however, a reduction in domestic expansion exerts no long term effects on economic growth as confirmed by Khan and Knight (1985). This is likely due to the SAPs including measures (in the long run) that might improve the productive sectors, for example, privatization and trade reform policies.

3.4.2 Fiscal Policy

A change in fiscal policy, whether through changes in government spending or tax revenues will be reflected in changes in the size of the budget deficit which will affect aggregate demand and hence, via absorption, the allocation of resources and the external balance. Accordingly, the need for fiscal adjustment may be seen in the context of the impact of fiscal policy on SAPs objectives, and the linkages between fiscal policy and other policy instruments. In this context, much of the theoretical debate on SAPs has focused on the relationship between the fiscal deficit and the external deficit. This relationship between the fiscal deficit and external deficit, is based on the current account of the balance of payment being equal to the gap between national saving and investment [Rao and Nallari: 51-53] that is:

$$M - X = (I - S) + (G - T) \dots (1)$$

Where is

M = Imports of goods and net services

X = Exports of goods and net services

I = Investment

S = National savings

G = Government expenditures

T = Taxes

Equation (1) shows the fiscal deficit ($G-T$) or government deficit must be matched by a private sector investing more than it saves and by a current account deficit ($M-X$).

More specifically, by dividing the investment (I) and the savings (S) into private and government sector components as follows:

$$I = I_p + I_g$$

$$S = S_p + S_g$$

$$\text{So } M - X = (I_p - S_p) + (I_g - S_g) + (G - T) \dots(2)$$

Where (p) and (g) refer to the private and government sector, respectively. This equation shows that an improvement in the external balance can take place only if sectoral savings rise relative to sectoral investments or by government borrowing reductions. In other words, as Dornbusch and Helmers (1988) argue, if policies do not have any effect on either government or private savings, the external balance cannot be expected to improve.

Empirically this hypothesis has been tested by Kelly (1982) and the evidence indicates an association between the government deficit /surplus and external deficit /surplus. Doroodian (1993) shows that a growing fiscal deficit leads to inflation and deterioration in the BOP. Feldstein and Horioka (1980) results indicate that budget deficits have very little impact on the external deficits.

In order to draw attention to the links between fiscal policy and economic growth, in standard Keynesian models, a reduction in government expenditure or an increase in taxation is expected to have a multiplier effect on the level of real income, at least in

the short run [Roa and Nallari, 2001: 173]. A basic description of the way fiscal policy may work in a small open economy, under fixed exchange rates, is that, in such a model, fiscal policy will have a strong effect on income and can be used also to stimulate the domestic economy [Husted and Melvin, 2001].

In developing countries, few studies have introduced fiscal variables directly into a growth model, and those that have done so, have not generally found the effects to be statistically significant. This is because, as Khan and Knight (1985) argued the effects of fiscal deficits on growth also turn out to be difficult to establish empirically due to the tight linkage between fiscal policy and monetary policy as such in models that include domestic credit expansion.¹¹ Empirical tests tend to suggest that fiscal variables have only a relatively modest role to play. Nevertheless, Iqbal, *et. al*, (2000) using Three-Gap analysis of structural adjustment in Pakistan suggests that fiscal contraction through reducing subsidies and public current consumption appears to have a positive effect on GDP. Doroodian's (1993) evidence shows that the estimate is positive but statistically insignificant in a growth model.

The literature shows that the impact of the budget deficit on macroeconomic imbalances depend on the source of financing it [Rao and Nallari, 2001: 168]. Indeed, a fiscal deficit can be financed in three ways: domestic credit from the banking system, borrowing from the private sector and foreign borrowing. The most visible dangers of borrowing either from the banking system or from abroad are that

both of them imply an expansion in the money supply, which is inflationary.¹² On the other hand, the direct effects of domestic or external borrowing is the increase in debt servicing and thus puts an additional burden on the government budget and calls for even more borrowing. Moreover, borrowing from the private sector may also crowd out private investment, leading to a fall in output¹³ [Dahel, 1997].

In SAP context, fiscal reform can be implemented via increasing government revenue or decreasing spending or both. On the revenue side, a fundamental tax reform appears to be a major factor in fiscal adjustment. In such a context, tax reform will not only enhance the revenue elasticity of the tax system but also, it can help remove distortions in incentives and resource allocation. Taxes influence relative prices through their differing impact on supply and demand for different products or factors of production. Thus, over time, tax reform affects resource allocation and growth [Gray and Linn, 1988]. Improving the administration of taxes is a key component of institutional fiscal reform in any country implementing adjustment programs.

According to the IMF (1998), tax administration reform refers to a wide range of activities including three different areas: the organization of tax administration, systems and procedures and enforcement. With respect to this point, countries which have to implement a new tax system, must also develop systems for classifying new categories of taxpayers and new forms of economic activity. However, the experience of many transition countries confirms that improvements in tax

administration are likely to be sufficient only if there is a strengthening of the political willingness to collect taxes. Tax reform, including some tax measures, might have a negative effect in the short run. For instance, the removal of an export tax may reduce government revenues and thus increase the fiscal deficit. However, in the long run the situation will change because such a policy should expand output and export earnings and bring in other new tax sources for government [IMF, 1988].

On the expenditure side, expenditure reductions often tend to be stressed in the initial stages of adjustment, with particular emphasis on cuts in current spending. In general, adjustment programs on the expenditure side involve [Chowdhury, 1991: 122]:

- (i) Reduction of subsidies to enterprises and consumers.
- (ii) Establishment of a core investment program to protect the higher priority projects.
- (iii) Well-targeted social safety nets to protect vulnerable groups.

It is worth noting that, fiscal adjustment in the IMF supported programs has been the subject of criticism from academics and several Non-Government Organizations. The main issues raised in this context include the following [IMF, 2002a]:

- (i) The program has not paid enough attention to protecting social spending especially, spending on education and health.

- (ii) The IMF programs impose tax increases as a major tool to reduce fiscal deficits, which has adverse effects on welfare and growth.
- (iii) Structural adjustment programs, particularly fiscal reforms, have not been serious in implementing compensatory measures to protect vulnerable groups from the adverse effects of the reforms.

Moreover, in some cases adjustment reform includes measures that hurt the poor and cause social unrest. In Jordan, for instance, the removal of food subsidies and the increase in the power resource prices caused riots in the whole country causing social and political unrest. In response to these criticisms the IMF and the World Bank announced a new strategy for the inclusion of Social Safety Nets to tackle the negative effects of the adjustment policies.¹⁴

In summary, reducing the size of the fiscal deficit is a primary objective of fiscal adjustment. Essentially, this requires an increase in government revenue and a reduction in government expenditure. However, in practice the implementation of a fiscal package is not as straightforward as its design might indicate. Indeed, the biggest obstacle facing a fiscal program is the conditions in the countries in which it is implemented. Typically the economy of these countries exhibits unemployment, inflation and limited financial resources. Under such situations, raising tax rates or imposing new taxes may be a real challenge. On the other hand, reducing subsidies can be politically risky and could cause an undesirable social reaction. Therefore, the timing and magnitude of a fiscal adjustment is an important factor in the

implementation of fiscal reform. Moreover, fiscal adjustment needs to be accompanied by an effort to improve the macroeconomic environment as a part of an overall economic package.

3.4.3 Devaluation

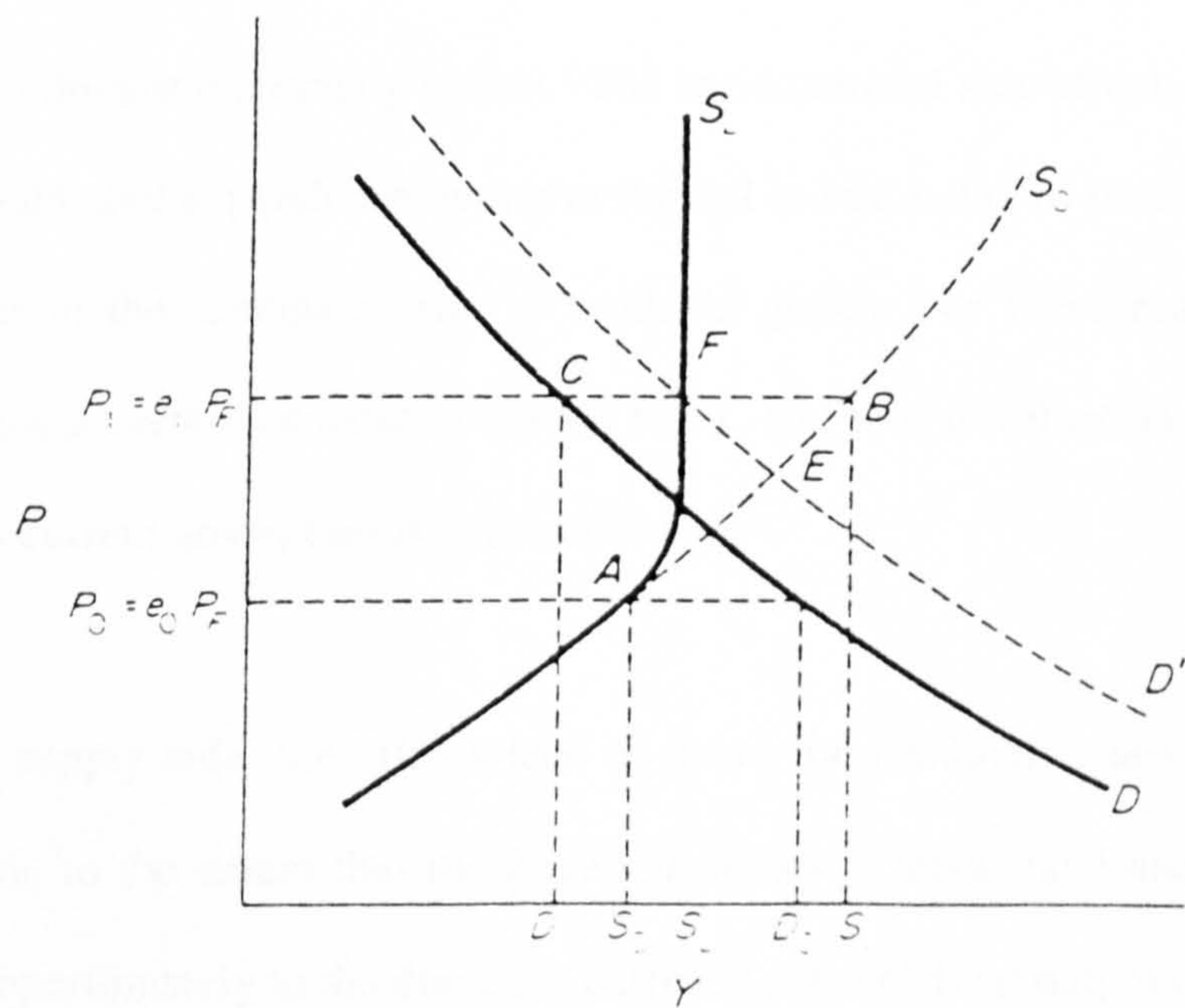
Devaluation is usually considered as an important tool of stabilization and adjustment of the foreign sector of an economy. It is argued that devaluation results mainly in expenditure switching policy, which leads to increase in the prices of tradables relative to nontradables, a devaluation thus expected to induce resource switching from the production of nontradables to the production of exports and imports substitutes. A devaluation is also expected to discourage imports thus improve the balance of payments position. Obviously, such policy falls back on the powers of the price system to induce improvement in the BOP.

In the literature, the effectiveness of devaluation as a stabilization device is a controversial issue. Such policy has been criticized on the grounds that it may lead to a decline in output. Firstly, devaluation lowers real domestic absorption through a reduction in real wealth due to a higher price level, which in turn may decrease the level of output. Secondly, as Edwards (1986) and Krugman and Taylor (1978) pointed out that devaluation might generate contractionary effects on aggregate demand and output, through a redistribution of income from the groups with a lower to a higher marginal propensity to save, thus lowering aggregate consumption. Thirdly, if the price elasticities of exports and imports are very low, then the trade

balance expressed in terms of domestic currency may deteriorate causing a recessionary effect in the economy.

Figure (3.2) illustrates a basic demand side and supply side aspect of devaluation in the case of a small open economy as explained by Khan and Knight (1982: 718-721).
in the Figure (3.2):

Figure (3.2)
Devaluation Effect



P: The domestic currency prices of output.

Y: The quantity of real output demanded and supplied by the domestic residents.

D: Real domestic demand is downward sloping, reflecting the fact that an increase in the price of output reduces the real values of nominal factor incomes and financial assets.

SL: The amount of real output that domestic producers would be willing to supply at each price level (since the model is static, the long run supply curve is assumed to be vertical).

Now, suppose that with the world price level (in domestic currency) equaling P_0 , there is excess real aggregate domestic demand equal to $(D_0 - S_0)$ and a current account deficit equal to $P_0 (D_0 - S_0)$. The devaluation increases the world price level to P_1 (in domestic currency terms). The main demand side effects are a reduction in real wealth and expenditure owing to the fall in real value of financial assets, and an increase in the domestic price of tradable goods. For these reasons, devaluation decreases domestic demand to a point like C and thus devaluation, from the point of view of current absorption is contractionary.

On the supply side, the effects tend to move the productive sector in the opposite direction, to the extent that the prices of domestic labor, land and capital, rise less than proportionately to the domestic currency price of final output in the short run, so devaluation thus has a temporary stimulative impact on aggregate supply (S_L to S_0). In these circumstances, devaluation tends to reduce excess domestic absorption and the payments deficit. Since foreign demand for domestic output is infinitely elastic at the price level P_1 , the short run effect of the devaluation is to turn the current account

from the deficit ($D_0 - S_0$) to a surplus of ($S_1 - D_1$). In the long run, as nominal factor prices gradually rise, output will tend to move back to equilibrium level curve SL . At the same time, the gradual rise in real income factors and financial assets resulting from a payments surplus will cause aggregate demand to shift gradually towards the long run curve D' . Thus, the effects of devaluation will shift the economy to point F , where demand/ supply balance and the current account are in equilibrium as a result of the effects of devaluation of both the demand and supply side of the economy.

Considering what has been said in the figure above, this approach suggests that devaluation does improve the current account, while the effects on the supply side depend on the extent to which devaluation raises product prices relative to factor prices in the short run. According to the elasticity approach, an improvement in the trade balance following devaluation, takes place, if the sum of demand elasticities for exports and imports is greater than unity, Marshall-Lerner condition (M-L) [Thirlwall, 1982].

This condition is necessary so that the change in the quantity of imports and exports demands together is sufficiently great to offset the loss in foreign earnings consequent upon lowering the price of exports in foreign currency and boosting economic growth. However, it is worth noting that the M-L condition does not hold in many developing countries.¹⁵ This is because the elasticity of demand for imports is inelastic, due to imports being concentrated on raw materials and capital goods, which are necessary for the country's development, thus the devaluation impact,

might be inflationary according to Krugman and Taylor (1978). In fact the contribution of such policy to achieve a significant increase in exports, or a substantial substitution of imports, as Silva Lopes (1989) indicated can be effective in a medium-term adjustment program. This is largely due to the productive sectors of the developing countries not being flexible enough to allow for such transfers of output and of demand.

The obvious question now is whether the evidence supports such policy action or not? The evidence is decidedly unclear; advocates argue that devaluation is a valuable policy for strengthening the balance of payments. Others see it as having a bad effect on the BOP. The review of this controversial issue is briefly discussed as follow: Khan (1999) indicates that Miles (1979) tested the effects of devaluation on the balance of payments for 14 industrialized and developing countries in 1960s. He found that devaluation reduced the balance of payments deficit. Graham Bird in his paper (1983: 474) provides an overview for various empirical studies about the effects of currency depreciation in developing countries and he strongly suggested that:

“Currency depreciation accompanied by appropriate complementary policies will strengthen the balance of payments.”

On the other side, Khan (1999) indicates that Rose (1991), Hughes and Singh (1991) rejected the existence of a relationship between the BOP and devaluation after they provided evidence from both industrialized and developing countries.

As to whether devaluation has expansionary or contractionary effects on the economy, the empirical findings are mixed. Both studies, Khan and Knight (1985), Gylfason and Schmid (1983) indicated that devaluation generates an expansionary rather than a contractionary effect on the economy. Branson (1986) found different conclusion, that devaluation was contractionary. Edwards (1986) suggested that in developing countries devaluation has led to contractionary effect only in the short run, and he explained that 10 per cent depreciation leads to a one-time loss of almost 1 per cent of GNP. However, in the long run its effects are found to be neutral.

Interestingly, most of the studies mentioned above used time series data without testing for stationarity.¹⁶ A recent study by Upadhyaya (1999), attempts to reassess the effects of devaluation on aggregate output in 6 Asian countries, utilizing the recent econometric methodology. The study suggests that devaluation is in general neutral in long run, although in some cases it might have a contractionary effect. Silva Lopes (1989) indicated that with respect to evaluating the efficiency of devaluation the following should be taken into consideration:

- (i) Sufficient time to produce the effects of devaluation, usually devaluation effects take time (more than one year) to be obvious, with respect to this point, exchange policy in the medium term program will be a tool for improving the allocation of resources by shifting the resources from production of nontradable goods to tradable good.

- (ii) The possibilities of reducing the undesirable effects of the exchange rate changes, in this sense, whilst there is agreement that depreciation will raise the prices level and wages, its consequences will be inflationary. Therefore, Lopes argues that it will be indispensable to combine the measures of adjustment of the exchange rate with anti-inflationary demand management policies.
- (iii) The alternative policies that might be used in place of devaluation, in this context, devaluation still needs to be evaluated against alternative policies that might be used in its place. Such as increasing the restrictions against imports, import quotas, import licenses, higher tariffs, exchange controls and credit controls - such policies are favored in many developing countries, particularly tariff or imports licenses.¹⁷ However, such policies cannot be used easily, mainly because there are international organizations like the WTO and the IMF who do not accept such restraints in international trade.

To sum up, at the empirical level, the issue of the effect of exchange rate devaluation on the economy remains unsettled. It would seem to be interesting to compare the path of some macroeconomic targets after devaluation with the same path applied before devaluation. The literature unfortunately does not offer empirical studies in this regard.

3.4.4 Interest Rate

The interest rate becomes a necessary instrument in a broader financial reform program, in order to achieve SAP targets. This is because interest rate reform entails a move towards a market-oriented system through the freeing of interest rates and capital mobility. In fact full financial liberalization includes, in addition to the freeing of official interest rates, privatization of public financial institutions, free entry into the banking sector and also, different measures aimed at enhancing competition in financial markets and free capital movement. However, this section deals only with the interest rate as an instrument in the context of SAPs.

In an open developed economy, the interest rate may have several roles. As a price of money, it will serve to allocate credit and to moderate the level of investment. It may influence the level of savings out of income or the amount of saved resources that goes to formal sector intermediaries. Its movement will also attract or repel short term capital from abroad and will thus serve for shoring up or reducing the net external balance. Because of its influence on investment and consumption, it may affect the general level of both activity and prices, and it can be regarded as an instrument for setting the level of the money supply or liquidity [Ross, 1991: 235].

The role of interest rates in the development process has been studied extensively in recent years. A mainstream of theoretical thought dealing with these issues has emerged from the McKinnon-Shaw (1973) model [Roa and Nallari, 2001]¹⁸. The model suggests that the elimination of distortions in the financial markets can be

expected to yield a higher growth rate not only because the quantity of investment increases but also, because the quality of investment improves. Broadly speaking, there is empirical evidence supporting the McKinnon-Shaw claim that there is a positive association between the degree of development of the financial sector and the overall economic performance of developing countries [Khan, 1985: 481]. Nevertheless, disagreement remains on the possible effects of interest rates on such macroeconomic variables. Several studies have found no direct relationship between the level of savings, investment and the interest rate [Tahir, 1997b: 72].

In Jordan, like other developing countries, the financial sector is said to be financially repressed. Financial repression is defined as a situation in which government regulations, such as interest rate ceilings and the imposition of reserve requirements for commercial banks as well as compulsory credit ceilings. Therefore, the influence of the interest rate as an instrument is affected by the practice of government where the interest rate is set according to national policy.¹⁹

Other factor affect the importance of interest rates for economic decision-making in some Islamic countries is the Islamic economic system. For instance, the Islamic economic system prohibits the payments or receipt of a predetermined rate of interest, which is considered usury [Ghamdi, 1989: 168]. This view states that banks must be transformed into equity based firms that operate under the principle of profit / loss sharing.²⁰

In the context of SAPs, the IMF and the World Bank literature has emphasized the potential gains of interest rate reform. It suggests that interest rate reforms would bring down inflation, improve the BOP through restoring the external competitiveness of the economy and promote more efficient allocation of productive resources [IMF, 1983]. However, the outcomes of these reform analyzed within the context of an SAP has been mixed. While freeing interest rates improved economic performance in some countries, as indicated by and Tahir (1997b), it has had negative consequences in many others, Giovannini (1983) and Burkett and Dutt (1991).

It was argued that the lack of success in the other experience was mainly due to the influence of many factors on the outcomes of such policies [Nashashibi, *et. al.*, 2001]. The main factors are the design and sequencing of the reform package, the macroeconomic environment and the speed of reform. Therefore, changes in interest rates and other financial reforms must be coordinated with the policy actions that are part of SAPs.

3.4.5 Privatization

Privatization programs are typically recommended by Bretton Woods Institutions (BWIs) as policies that will enhance economic efficiency, strengthen market forces, and generate economic growth. They are understood as a process whereby the public sector relinquishes ownership and management of state enterprises to the private sector. The theme of privatization is based on the neoclassical hypothesis that private ownership enhances both greater efficiency and economic growth. Many

leading writers of this school argue that too much close state intervention in economic activity slows economic growth in most of the Third World [Todaro, 1997: 86-87].

The question arises; does privatization lead to greater economic efficiency? As Todaro (1997: 631-632) mentioned in high and middle income countries, most studies indicate that privatization appears to be successful in promoting greater efficiency and more output, while in low income countries the results are still mixed. In a recent study by Al-Obaidan (2002) attempts has been made to provide quantitative evidence of the magnitude of the macroeconomic effect of privatization in 45 developing countries, using the concept of frontier production functions. Al-Obaidan suggests that developing countries can increase the utility of human assets and the capital stock by nearly 45 per cent by adopting privatization and converting to market based economies. With respect to this point, it should borne in mind that privatization of public enterprises will not make them efficient until it is coupled with financial and economic liberalization.

Indeed, privatization can improve efficiency only when it takes place in open competitive markets [Ayres, 1995], otherwise privatization will replace public monopolies with private monopolies, thereby allowing a few groups to gain the profits that formally accrued to the government. Thus, privatization under these circumstances is likely to cause adverse income distribution by increasing the gap between rich and poor.

Stiglitz (2002) sees the long-term effects of privatization and trade liberalization as no doubt beneficial; on the other hand, Stiglitz contends that the short-term effects can be disastrous. Stiglitz also, believes that forcing privatization before sound regulatory frameworks and strong financial institutions are in place needlessly creates monopolies; see Stiglitz, (2002) and Snowden (2001). This argument, however, is an important, particularly with respect to the developing countries where financial institutions and frameworks are unsound.

In any country adopting privatisation, governments and people must prepare themselves for the costs they have to pay both economically and socially, such as unemployment, high price levels and cutbacks in services that might be severe in the short-run. This is because the benefits of privatization, such as high employment and high investment, do not appear until the medium-term [Shirley, 1988]. Therefore, the success of privatization should be evaluated in terms of the net benefits that the economy gained as a whole not in terms of the contract itself or the price paid to the government.

Finally, the World Bank, despite its market ideology, emphasizes that the government does have a role to play, not only overall macroeconomic management and facilitating a suitable economic environment for the private sector, but also by investing in social infrastructure, health care and the education sectors [Chowdhury, 1991: 156].

3.4.6 Trade Liberalization

As far as the World Bank and the IMF are concerned, trade liberalization enhances economic growth and leads to better resource allocation. Therefore, trade policy reforms are considered an important component of structural adjustment policies.

These reforms include:

- (i) Import liberalization, including the elimination of non-tariff barriers (quantitative restrictions), unifying and reducing tariffs and removal of import licenses.
- (ii) Exports Promotion, including the elimination or reduction of export taxes and promotion of non-traditional exports.

With respect to the reasons for trade reform, as trade optimists, Bhagwati (1994) and Balassa, *et. al.*, (1986) argue that trade liberalization provides a number of benefits.

The most important of these benefits are:

- (i) It promotes competition, leading to a more efficient allocation of resources.
- (ii) It extends economic growth.
- (iii) It attracts foreign capital and generates needed foreign currency that can be used to finance imports.

The optimists also, argued that there are other direct gains from free trade. As the experience of most developing countries indicates, the cost of trade restrictions and domestic government intervention are most severe when the country faces external

shocks. Such was the case in the 1970s and the early 1980s when developing countries were hit by severe shocks like deteriorating terms of trade and rising energy prices [Abdallah, 1997: 265]. Thus the results were large trade and budget deficits, debt crises and both internal and external pressures for reform and structural adjustment.

As mentioned previously, trade liberalization is considered as an important policy of a structural adjustment package. This is mainly because of the relationship between trade and economic growth. Removal of trade restrictions and the reduction in state intervention will increase exports and thereby achieve a high rate of economic growth. Researches used by Abdallah (1997: 265) indicate that Greenaway and Sapstord (1994) having reviewed 14 empirical studies found that the relationship between export growth and economic growth was positive in 12 countries out of the 14 countries.

Thomas and Nash (1991) found evidence to support the idea of economic openness encouraging long-term economic growth. In a recent study by Jang (2002) investigates the validity of the relationship between export growth and economic growth for the 4 largest provinces in Korea. He indicated that export expansion had a significant short-run effect on output growth for all the provinces. However, in the long run, the effects of export expansion on output growth are insignificant.

On the other hand, trade pessimists concluded that trade liberalization hurts Third World development, mainly because of the limited growth of world demand for their traditional exports. Also they argue that there is a high possibility of balance of payments deficits as result of the high price elasticity of their imports. So import liberalization will lead to an increase in imports leaving the BOP in a worse position [Todaro, 1997: 479]. It was found the trade liberalization has more than doubled import growth on average across 22 developing countries, but in most cases imports increased by more than exports, causing trade imbalances and thus balance of payment crises [Santos-Pavolino, 2002].

However, many economists argue that the degree of success of trade reforms mainly depends on the level of economic development, such as nature of imbalances in the economy, macroeconomic imbalances, market distortions and the properties of the reform program [Abdallah, 1997]. Liberalization need to be accompanied by an export promotion strategy, in order to maintain a sustainable balance of payments position, otherwise such a policy will hurt the BOP more than it improves it.

3.4.7 Social Safety Nets

Needless to say that much of the analysis and technical advice and policy on social issues is undertaken by international agencies other than the IMF, such as the World Bank and the United Nations Development Program (UNDP). However, with the shift of the IMF financial lending from industrial countries to developing countries since the 1970s and to economies in transition since the late 1980s, much greater

attention has been given to the complementarity of macroeconomic policies and structural reforms. The interrelationships between economic and social issues have also increasingly been recognized. According to Chu and Gupta (1998), the increasing involvement of the IMF in social issues has been discussed by its executive board on several occasions, Chu and Gupta (1998: 4) argued that:

“In 1988, for example, the Board stressed the need to assist member countries in evaluating the implications of IMF-supported adjustment programs for income distribution and poverty, to strengthen the staff’s understanding of the channels through which adjustment policies affect the poor, and to draw more extensively on the expertise of the World Bank and UN institutions.”

On the other hand, the joint World Bank-IMF Development Committee, which also has discussed social issues, has encouraged both the World Bank and the IMF to further intensify their efforts, working closely together, in helping to design and implement well-targeted measures to mitigate the costs of adjustment [Chu and Gupta, 1998].

The experience of many developing countries has shown the need for protecting vulnerable groups during the adjustment by constructing well-targeted social safety nets and by safeguarding access of these groups to basic public services. Practically, the IMF involvement in dealing with the social dimensions of SAPs was a response to the critique of its policies in developing countries, particularly after the publication of the well known UNICEF’s Report in 1987 and more recently, the international debt reduction campaign Jubilee 2000, which highlights that policies

implemented under SAPs contributed to aggravating poverty and causing social setbacks, because of its debt management and neo-liberal structural adjustment policy vis-à-vis the developing countries.

Practically, in 1999, the IMF and the World Bank together introduced its Poverty Reduction Strategy Papers (PRSPs), which include different measures in dealing with 70 low-income countries. With regard to the SAPs, the IMF has advised the authorities, with varying details, on the integration of Social Safety Nets (SSNs) in designing reform programs. According to the IMF (1995: 28):

“SSNs are a combination of measures aimed at mitigating the short-term adverse effects of economic reforms on the poor.”

Typically, the major components of SSNs have included the following measures as in IMF (1995) and Chu and Gupta (1998), which can be summarized as follows:

- (i) *Technical Assistance*: most of the technical assistance work has highlighted the interactions between measures to mitigate the adverse effects of adjustment and formal social security instruments.
- (ii) *Reforming Consumer Subsidies*: the main recommendations here involve eliminating generalized subsidies within a short time of implementing the program, mainly to allow a reduction in production distortions. In general,

the IMF recommendations might include different measures such as limited quantity food stamps, which may be targeted by region or category.

- (iii) *Improving Social Security Arrangements:* these include the need for pension funds, disability insurance and child allowances.
- (iv) *Unemployment Benefits:* as the reforms usually involve a temporary increase in unemployment, an important aspect of SSNs has been enhanced unemployment benefit schemes, provision of severance pay, and low-wage public works schemes.

The IMF assistance and recommendations regarding the SSNs are different according to the country's varying conditions, administrative capabilities, macroeconomic constraints and aggregate resource potential. Therefore, evaluation of the SSNs should be taken on a country's experiences base. In fact, according to Wood (1997) the safety programs generally have been ineffective, because of the difficulty in ensuring that the benefits reach the most needy and because of delays and shortfalls in financing.

3.5 Structural Adjustment Program: Impacts and Critiques

Although there is many empirical studies researched the effects of adjustment policies on the economy using different methods, these studies do not give any clear-cut evidence. Whereas the results obtained differ from country to country and from

one region to another. However, the mainstream literature shows opposing two teams regarding the effects of structural adjustment programs, as summarized by Crisp and Kelly (1999):

The proponents argued that reforms would sustain growth in developing economies and inhibit high inflation. Policies such as trade liberalization, financial liberalization and privatization are necessary to stimulate investment. Moreover, it was argued that state intervention had created the crises in these countries, so a restructuring of the role of government was required to restore growth and lower inflation.

The opponents of structural adjustment argued that the economic stabilization package has significantly contributed to increasing levels of poverty. Elements such as devaluation and the removal of food and energy price supports (relatively representing large parts of poor people's budgets) lead to higher prices. Moreover, cutbacks in government jobs and spending would cause more poverty and social setbacks. Obviously, well-known opponents like Stiglitz (the former senior vice president at the World Bank) argued that the IMF approached the LDCs problems from the perspectives and ideology of the financial community and its interests²¹. He said that:

“The IMF may not have become the bill collector of the G-7, but it clearly worked hard to make sure that G-7 lenders got repaid” [Stiglitz, 2002: 208].

Now, which claims are true? Indeed, an empirical study for a specific country would give a clearer answer for such a question. In summary, the available empirical evidence suggests that the IMF and the World bank-supported programs, have had a positive impact on the BOP, negative effect on investment, varied effects on the current account and no discernible effect on inflation and growth rates [Ul-Haque and Khan (1998)]. However, it is widely accepted that SAPs have caused social setbacks amongst the vulnerable groups of the adjusting countries, as will be illustrated in this section. The IMF and World Bank package has not escaped severe criticism, most apparently by Structuralists, Socialists, LDCs, NGOs and individual writers. In the following we will show the main critiques of the SAPs:

(A) *Criticism of the Theory*: Much of the criticism against the adjustment theory centers on both the theoretical as well as the practical validity of the monetary approach to the BOP. On the theoretical level, the initial criticisms came from the Structuralist school. They rejected the idea that disequilibrium in LDCs is caused by endogenous factors (LDCs' mismanagement). They argued that macroeconomic imbalances in LDCs are caused by structural characteristics of these countries, which the IMF neglects, and are aggravated by external events [Pastor, 1987]. A similar line of argument has been repeated by Cline (1988: 11) who concluded that approximately 85 per cent of LDC debt problems are caused by exogenous factors, i.e. deterioration in the terms of trade, higher interest rates, and higher prices of imports.

On the other hand, the SAPs are based on the neoclassical economic theory that assumes an automatic market adjustment towards full equilibrium. The Structuralists think that this assumption is flawed or may not occur, due to rigid economic and social structures in developing countries. These rigidities include the presence of oligopolistic industries; institutionally determined wages, fixed coefficient production functions, rigid trade elasticities and poor credit and transport systems. Given these rigidities, adjustment policies may result in unemployment, inflation and BOP difficulties [Taylor, 1988] and [Wijnbergen, 1986].

The second main theoretical criticism widened by the Structuralists is that tight money caused by credit ceilings, often lead to an excessively high interest rate. These higher interest rates had a number of detrimental effects: they raise the cost of the country's internal debt and they lead to increases in the cost of capital for small and medium businesses with the result of upward pressure on prices in the long run. The IMF's programs stress the importance of monetary authorities in restraining the levels of domestic credit, based on the assumption that prices and wages are flexible, and thus they are expected to reduce the prices of nontradables relative to tradables and expand the production of tradables.

However, given rigid prices in developing countries, monetary restraint could be expected to result in declining utilization and unemployment as indicated by Demery and Addison (1987) and Khan and Knight (1985). Taylor (1988), on the other hand,

argued that contractionary monetary policy may not only causes a decline in aggregate demand but also, an increase in interest rates and inflation.

On the practical level, the monetary approach to the BOP emphasizes the significance of the monetary authorities in controlling money and credit. However, the evidence documents the instability of money demand in most developing countries, as well as the complexity of controlling the money supply with an underdeveloped financial controlling system. Finally, others have complained that the financial program has failed to incorporate formally important recent developments in international macroeconomics [Zaki, 2001].

On the fiscal side, according to Alba (n.d), the Structuralists argue that even though contractionary fiscal policy may be able to reduce aggregate demand. However, reducing public investments will have detrimental effects on output growth. It is believed that public investment in infrastructure and public goods stimulates private investment, so a decline in the level of public sector investments would dampen private investments and growth prospects. In summary, Structuralists are pessimistic about the ability of the IMF and World Bank packages to correct imbalances in LDCs.

(B) *Lack of a Human Face*: social dimensions of structural adjustment have not received the attention they deserve in the design and implementation of orthodox stabilization and adjustment in the developing countries, at least not before the

publication of the well-known UNICEF's Report in 1987. This report pointed to some important negative social consequences of SAPs (policies, such as cuts in government expenditure, depressed employment and decreases in the local currency) contributed in aggravating poverty, causing social setbacks amongst the vulnerable groups. Accordingly, the UNICEF has called for an alternative approach (adjustment with a human face) as part of the process of poverty alleviation.

This approach, adjustment with human face, implies that adjustment policies should not be intended only to reduce macroeconomic imbalances; they should be applied as an integral part of a long-term development strategy. Focusing on narrow economic policy would only endanger the future growth and development potential of the economy. So the UNICEF approach takes account of the both economic as well as non-economic aspects of society [Zack-Williams, 2000].

In fact there has been considerable debate and criticism on the effects of SAPs on the poor and vulnerable groups, see for example, Stewart (1990); Berry (1995); Michel (1997) and Danaher (1994). Much of this criticism has focused on the direct links between adjustment programs and the worsening fate of vulnerable groups, such as the poor and those on fixed incomes. And most recently, the international debt reduction campaign, Jubilee 2000, succeeded in putting the IMF under political pressure because of its debt management and neo-liberal structural adjustment policy vis-a-vis the developing countries.

In response to the sharp criticism from several world organizations, the IMF and the World Bank have new policies that have included anti-poverty policies to minimize the social effects of SAPs through Social Safety Nets (SSNs). On the World Bank side, it has developed its Comprehensive Development Framework (CDF) replacing conditionality as the principle of its structural adjustment lending with partnerships between itself as “Knowledge Bank” and the borrowing government. Moreover, the CDF includes country’s ownership of its development program which -as a new principle- is supposed to give freedom to a country to design its own program. James Wolfensohn (the World Bank President) indicates that:

“We have learned that there is a need for balance, we must consider the financial, the institutional and the social together, development is about putting all component parts in place together and in harmony” [Pender, 2001: 407].

The new development approach (CDF), in addition to its old style approach policies, will include the following policies [World Bank, 2000]:

- (i) Strong welfare measures: education, health provision.
- (ii) Good infrastructure: clean water, sewerage, electricity and transportation systems.
- (iii) Environmental policies: rural development, urban management policy and environment preservation.
- (iv) Good policy environment: open and honest government, property and personal rights laws.
- (v) Financial regulations.

As to the IMF response, although the IMF considers itself as a monetary institution not an aid agency or development bank, it has recently been announced in its website that:

“The IMF is working to streamline its conditionality by making it more sharply focused on macroeconomic and financial sector policies (the heart of the IMF’s concern) less intrusive into a country’s policy choices, more conducive to a country’s ownership of policy programs, and more effective” [IMF, 2002 b].

In fact the concerns from both the IMF and the World Bank have led to the declaration of a new approach aimed at reducing poverty in low-income countries. They have replaced the classic SAPs by Poverty Reduction Strategies Papers (PRSPs). The main principles of this strategy (PRSPs) [ibid] are:

- (i) A comprehensive approach to development, with poverty reduction a priority.
- (ii) Country ownership of the goals, strategy and direction of the development.
- (iii) Partnership with civil society and the development community.
- (iv) Rapid economic growth.

In the light of the above, poverty reduction has become one of the prime objectives of the BWIs and its programs and operations in low-income countries. It must be taken into consideration that this is a significant change in the role of the World Bank and the IMF in developmental strategies. In the case of both institutions, having implemented their plans, in practice they would have a new quality of

economic and social results, which perhaps led to the expression of a new face of structural adjustment programs.

It is worth noting that, it is not clear whether ownership of the development program will lead to the freedom of a government to formulate and implement its own economic development policy (National Program) or just provide more room for countries to set their own priorities and program's objectives. Both institutions have different views with respect to this point.²² Khan and Sharma (2001) argue that the ownership of IMF programs is an elusive concept and it is hard to define.

Implicitly ownership refers to a situation in which the policy content of the program is similar to what the country itself would have chosen in the situation where the country shares with the IMF the objectives and the policies. Pender (2001) argues that if we understand ownership to mean the freedom of the government to formulate and implement its own economic development policy, the scope of ownership in the CDF approach seems to be "severely constrained."

Wood (1997) in describing program ownership in the SAPs argues that practically the IMF and the World Bank in their programs tend to prescribe standard policy packages, which the adjusting countries can only negotiate around. Therefore, ownership should not be a public relations exercise aimed at convincing the government and civil society that there is no alternative.

The crucial question might be asked here is whether there are any direct effects of ownership on program implementation? Theoretically, government owned programs are likely to achieve superior results, precisely because they are developed with an understanding of how the economy operates and made to suit local conditions based on local knowledge. However, empirically there is no direct empirical evidence on the link between ownership and the SAP outcomes. Practically, Wood (1997) argued that governments prefer not to own the programs because they can blame the IMF or the World Bank for politically hard and unpopular policy changes which they privately believe to be inescapable.

In Jordan, for instance, on many occasions it was easy for the government to blame the BWIs for taking difficult and unpopular measures (putting the price up and cutting subsidies) instead of trying to convince the public that the reforms were essential for the economy to overcome the economic crisis. Generally speaking, effective and sustained reform requires government and civil society ownership of programs to ensure effective implementation. Therefore, government should be free to decide on the nature of reforms, their sequencing and timing.

(D) Structural Adjustment Programs Are Identical: structural adjustment started in Latin America, moved to Sub-Saharan Africa, then to South Asia and has now gone further into the Middle East. Almost 100 countries around the world have implemented structural adjustment programs so far. Whatever the country's circumstances or the economic background, the cure is the IMF and the World Bank

prescription, the four “actions” stabilization, liberalization, deregulation and privatization. To the IMF’s economists the reasons for the programs similarity, as highlighted by Zaki (2001) can be attributed to:

- (i) The similarity in the economic conditions of the member countries seeking the IMF help.
- (ii) The use of a similar quantitative framework to determine the performance criteria.
- (iii) Moreover, the IMF staff argues that although the established policies impart a degree of inflexibility, they also allow member countries a full understanding of the conditions and terms of IMF assistance. Generally speaking, in response to all this criticisms, the IMF changed some aspects of its operations and suggested future modified behaviour.²³

However, on different occasion, different policies have been given to different countries. For instance, the IMF policies aimed at reducing the real wages of public sector workers in Cote d’Ivoire, but to raise them in Uganda and to lower tax revenue in Zimbabwe, but to raise it in Ghana [Collier and Gunning, 1999: 635]. On the other hand, according to IMF staff Mussa and Savastano (1999) in response to the old (new) criticism of the IMF traditional approach in dealing with the widely different challenges, represented by the collapse of the centrally planned economies in the Soviet Union and Eastern Europe and with the financial crises of Mexico, Thailand, Indonesia and Korea in 1995-1998, Mussa and Savastano (25-26) argue

that the IMF approach in dealing with these recent problems was, in fact, quite different from the earlier IMF-Supported programs. They indicate that:

“ The IMF arrangements for Mexico during the debt crisis of the 1980s consisted mostly of sizable fiscal adjustments, modest official financing and a concerted rollover of commercial bank credits, whereas the 1995-1996 stand-by arrangement involved modest fiscal adjustment and very large official financing.”

Moreover, Mussa and Savastan illustrated other evidence to support that the IMF is flexible enough to respond to different countries circumstances and the IMF-supported programs are far from uniform, notwithstanding their superficial appearances. This is because the members dealing with the IMF have quite different economies, face different problems and thus display a variety of policy regimes and different ability and willingness to implement policies to correct external payments imbalances and their underlying causes. Therefore, the IMF programs need to be flexible in addressing these problems.

(E) *Political Consequences of SAP*: structural adjustment not only involves economic and social aspects it also, implies political and institutional aspects. SAPs include several policies, which would have led to a change in the state's aspect, such as structural policies, including corporate governance policies, anti-corruption measures and democratic practices. On the positive side, it found that structural adjustment programs have a positive impact on the process of democratization in developing countries [Kleinberg and Clark, 2000]. On the negative side, structural programs are usually accompanied by a high political price, which mainly took the

form of riots, as in Tunisia, Morocco, Jordan and other developing countries. In many cases structural adjustment leads to the fall of governments [WhirledBank, n.d].

In Jordan case, riots broke out two days in several cities in the country; the protesters demanded resignation of the government as the government responded to the IMF's requirements by raising the prices of several goods and services without giving any hint to the population that such a move was coming. However, although the protesters were demanding the government resignation as response to the prices hikes, they did demand to put an end to the corruption (where the government came to be associated with high level of corruption as scandals involving Royal Jordanian and the Petra Bank) they also, did demand for greater political freedoms as professional organization soon joined in focusing their demands on greater political representation.

In general, the future indicates that developing countries have to pay a high political price to qualify for donor community's loans or aid. Particularly, after September 11 where the American President announced on March 2002 at the United Nations, Financing for Development Conference that:

“... We must tie greater aid to political and legal and economic reforms...the additional funds would be granted to poorer nations that rooted out corruption and terrorism, respected human rights, and improved education and health care for all citizens” [Online News Hour, 2002].

This important development, if applied in practice, means that the relationship between the developing countries and donor communities represented by the IMF and World Bank will witness a significant change in the future.

3.6 Specification of the Model

From what has been discussed so far, essentially the objective of SAP is to create conditions, through policy measures, which would enable the country to attain an adequate rate of economic growth, low rate of inflation and sustainable external payments position. Several measures and instruments are called for to achieve these targets.

In Jordan, to address the rapidly growing imbalances, the government adopted a long term growth oriented SAP supported by the IMF and the World Bank. Since 1989 under the ongoing reform, Jordan has received an estimation over one billion US\$ in IMF and World Bank adjustment lending. These loans have been contingent on a number of policy reforms, including: reducing budget deficit, reducing current account deficit, containing growth of domestic credit, curtailing the rate of inflation and liberalizing interest rate. The ultimate aim of these reforms has been to increase economic growth rates.

On the basis of the observations above, the aim here is to suggest a model, which would be used to examine the possible effects of SAP policies in Jordan. Before we

refer to the model it might be useful to make the following assumptions about Jordan which, by and large, represent a typical developing country, where:

- (i) The financial market is underdeveloped.
- (ii) Democratic forces are at an early stage of development.
- (iii) There is lack of international capital movement.
- (iv) The economy is strongly affected by the political situation in the Middle East, where it borders with Palestine and Israel to the West and Iraq to the East and Syria to the North.

Consequently, the aim here is to evaluate the effectiveness of SAP policies and instruments in Jordan over the program period 1992-2001, using simple but appropriate models. To do so, this study will apply an econometric procedure proposed by Goldstein and Montial (1986), Khan (1991) and Doroodian (1993). In general, the estimation was made for several equations where the dependent variables were the macroeconomic targets and the program policies appeared as explanatory variables in each equation. In many cases, however, emphasis was made on the distinction between the influence of program finance and the influence of policy conditions attached to this finance as in Harrigan and Mosley (1991) and Iqbal (1993).

As our aim is to evaluate the effectiveness of SAPs policies and instruments, this study will apply what we might call Objective-Instrument procedure, where the change in the macroeconomic targets will be function:

- (i) Changes in macroeconomic policy instruments.
- (ii) Changes in the external conditions that would have an effect on the macroeconomic targets.

Thus, the significance of the instruments in the estimated equations refer to their importance in achieving the targets concerned, otherwise the insignificance of these tools means that the target achieved is due to non-program policies. The above model can be set as follows:

$$Y_i = f(x_i, w_i) \dots (1) \quad i = 1, 2, 3 \dots n$$

Where

Y_i : Macroeconomic targets variables

x_i : Vector of SAP's instruments and policies

w_i : Vector of external variables.

Doroodian (1993) provides some empirical foundation for the analysis. The effects of such programs on macroeconomic variables investigated through regression analysis. The purpose of his study is to examine directly the effects that a typical stabilization program may have on the there main macroeconomic variables,

economic growth, inflation rate and current account. To do so, three models that examine the relationship between relevant macroeconomic variables and SAP instruments are used. The data are composed of time-series, cross-section observations for 43 countries during 1977-1983.

To capture the effects of the external factors on the adjustment processes, Doroodian (1993) made further analysis to the basic models to include the percentage changes in terms of trade. This variable included in the economic growth and current models to investigate the effects that might have on the relevant variables.

In general, the statistical results show that the IMF adjustment policies improve the inflation rate moderately and current account balance significantly. However, the program policies do not have much impact on the level of economic growth. Although the results presented in the Doroodian study jibe with the other evidence in the literature, it did not test for stationarity. Recent developments in time series econometrics suggest that the use of non-stationary series can produce superior regression coefficients.

As the aim here is to evaluate the effectiveness of the SAP policies, considering what has been illustrated earlier, this study will estimate the following form:

$$y_i = f(x_i, wr) \dots (2)$$

In this model, in attempt to evaluate the effect of SAPs: the macroeconomic targets (Y_i) represent; economic growth, inflation rate and international reserves. These objectives are the main aims of SAPs in Jordan. As for the SAPs instruments and policies (X_i) comprise a typical SAP instruments, which are, fiscal and monetary policies, interest rate and exchange rate. This equation is a formal interpretation of the main theory underlying a typical SAP implemented by the Jordan. Where (Y_i) stand for the program macroeconomic targets and (X_i) vector represent policies and instruments attached to SAPs included (domestic credit, exchange rate, fiscal deficit and interest rate). Therefore, it can be viewed as model includes both demand and supply side factors and linking change in each if these instruments to program targets.

In attempts to capture the external factors that would have effect on the targets variables, the equation includes workers' remittances (Wr), this due to the particular circumstances of Jordan during the programs period (described in Chapter Two) where the workers' remittances play a vital role in the economy. The effect of the programs will be determined by the sign and statistically significance of the program dummy variable. However, the estimated coefficients of program's policies (X_i) would show the effectiveness of the program tools.

Moreover, this study aims to investigate the impact of the SAPs and trade liberalization on the behavior of country's exports and imports. On the other hand, following the elasticity approach to balance of payments and M-L condition, we will

determine the validity of the devaluation of the JD as a policy measure to reduce the trade deficit problem. To do so, a traditional import and export demand equations will be estimated. By using program dummy in each equation, we will be able to evaluate whether the trade liberalization implemented under SAPs has any effect on trade balance. Following what has been discussed above; the following equations will be used for estimation purposes.

3.6.1 Economic Growth Equation

Recent developments in growth literature, Barro (1990) and Barro and Sala-i-Martin (1992), have emphasized that economic conditions and implementation of appropriate public policies influence the rate of economic growth. They link economic growth to fiscal variables in their models, which were tested empirically by Cashin (1995). Fischer (1993) extends the notion that government can influence growth by creating macroeconomic policies that are conducive to growth. The key macroeconomic policies that considered are monetary, fiscal and exchange rate policies.

To measure this effect, Fischer (1993) recommends using basic indicators of macroeconomic policy and monetary policy. In particular, Fischer used a regression to identify the channels through which macroeconomic variables affect economic growth. For the purpose of evaluating the effect of the SAP policies in achieving economic growth target, the following equation will be estimated:

$$RGDP = f(DC, BD, INT, EX, WR) \dots (3)$$

Where *RGDP* is the real GD; *DC*, *BD*, *INT* and *EX* are the SAP's typical tools: domestic credit, fiscal deficit, interest rate and exchange rate, respectively. *WR* is the Jordanian remittances. A dummy variable will be introduced here to measure the impact caused by the introduction of SAPs.

3.6.2 Reserves Equation

Enhancing international reserves appear as one of the important targets for Jordan under SAPs, where the country's international reserve in 1989 decreased to the lowest level ever. To examine the effect of SAPs on achieving this target the following equation will be estimated:

$$RES = f(DC, BD, INT, EX, WR) \dots (5)$$

Where *RES* stand for official reserves, as the earlier equations; *DC*, *BD*, *INT* and *EX* represent the program tools. *WR* is the workers' remittances. Also a dummy variable for the potential contribution of SAPs will be added to the equation to measure this effect. Although it may be argued that the formulation of the model in a simple equation is extremely simple, the estimates obtained still yield useful information on the relative importance of the various factors affecting the international reserves.

3.6.3 Inflation Rate Equation

In the literature traditional models of inflation are often based on the Monetarist and Structuralist claims, as it has been illustrated by Taylor (1991) and Balakrishanan (1994). The monetarist model attributes inflation to the excess of money growth over real output growth, while the Structuralist model views inflation as the result of sectoral disequilibrium, notably the weak balance of payments position or slow growth of agriculture. However, for the purpose of evaluating the impact of SAP instruments in controlling the inflation rate as one of SAP targets. A simple function links the main SAPs instruments and inflation target as follows:

$$INF = f(DC, BD, INT, EX, MS, WR) \dots(4)$$

Where *INF* refers to inflation rate, *MS* is the money supply (M2), *DC*, *BD*, *EX* and *INT* are the domestic credit, budget deficit, interest rate and exchange rate, respectively. A dummy variable taking account of SAPs introduction will be taken up here and added to the right side of the model to measure the contribution made by SAPs.

3.6.4 Import Demand Equation

Economic theory determines a number of main variables that have a significant effect on imports. The simplest import function is one that relates the quantity of imports demand to the real income level and to the relative price of imports. The level of foreign exchange is also relevant for designing import behavior in

developing country like Jordan, therefore remittances of Jordanian working abroad included to the model, as has been elaborated by Dutta and Ahmed (1999), Bahmani-Oskooee (1986). Accordingly, the import demand function takes the following form:

$$IMP = f(Y, PM, WR) \dots (6)$$

Where *IMP* is the value of imports, *Y* and *PM* refer to: the level of real income, the price ratio of import price to domestic price index, respectively. *WR* is the workers' remittances. To capture the effect of the SAP and mainly trade liberalization policy a dummy variable will be added to the equation above.

3.6.5 Export Demand Equation

Similarly for the export demand function by considering the literature in Arize (1990), Arize, *et. al.* (2000) and Zaidan (1999) the equation is derived from the simple relationship between exports *EXP*, international competitiveness *EP* and world income *WG*.

$$EXP = f(EP, WG) \dots (7)$$

Where *EXP* refers to total exports, *EP* and *WG* are the relative price of export demand and the foreign income. A dummy variable will be introduced here to measure the impact caused by SAPs.

3.7 Data Sources and Problems

For under-taking a meaningful regression analysis, the data used here are on annual basis running from 1972 to 2001. Two main sources of data have been used in construction of data set. The sources for macro indicators are:

- (i) International Monetary Fund, International Financial Statistics (IFS).
- (ii) Central Bank of Jordan (CBJ), several Annual Reports and Monthly Bulletins.

It is notable to refer here to some problems that faced me in the early stage of data collection. In general, one should be skeptical of the accuracy of the official Jordanian data, particularly since different sources present different figures for the same variables. On the other hand, there was a change in the official methods of collecting and reporting the data. Therefore, to minimize this problem, the data set are based on only two sources the (IFS) and (CBJ) according to the availability and consistency of the data. Moreover, all data set was subject to scrutinize process. Data definition and measurement are summarized in Appendix (i).

3.8 Conclusion

Structural adjustment program design is often a difficult task, involving, not only a complex set of macroeconomic relationships, but also some political and social aspects. From what has preceded, one can realize that the World Bank and the IMF reviews of structural adjustment is an ongoing process. The classic SAP in the 1970s

and early 1980s has changed. Both institutions adopted a new development approach (New SAP) and this program represents a comprehensive approach emphasizing economic as well as social aspects in the reform process. The substance of the SAPs, however, remains based on neo-liberal economic theory and the monetarist approach to the BOP.

These programs have generally three components. Firstly, policies that would stabilize the macroeconomic imbalances. Secondly, institute market reforms and structural changes that would improve efficiency and restore growth. Thirdly, secure sustainable external financing. However, the objectives of high economic growth and alleviating poverty are not stated explicitly among these core objectives, but according to IMF staff, Mussa and Savastano (1999: 4):

“This does not imply unconcern with these objectives but rather the priority that a country experiencing severe balance of payments difficulties must assign in the shorter term to ameliorating these difficulties and correcting the macroeconomic and structural imbalances at their root, in order to achieve more basic objectives in a sustainable manner over the longer term.”

The review of the IMF and the World Bank adjustment programs suggest that much of the criticism is directed at the macroeconomic policies through fiscal and monetary restraints introduced by the IMF to achieve external and internal balances, which the critics claim sacrifices growth to achieve stabilization. On the other hand, the IMF program emphasizes internal factors and suggests a direct and causal relationship between excessive credit creation (domestic economic mismanagement)

and the deterioration of external account, thus the external factors have been ignored in relation to the BOP performance.

With respect to the effects of implementing adjustment policies, to date, empirical studies do not give any final verdict. The results differ from country to country, there are some success stories and many failures due to the fact that the circumstances of each borrowing country are different, and so is the economic and political framework of policy-making, therefore is not surprising that every experience tells a different story. However, whether or not the introduction of new SAPs will lead to different output will be a good basis for further research.

The program have made little effort to adopt to the circumstances of developing countries, which are always characterized by limited economic diversification, low levels of industrialization, a dependence on a narrow export base, lack of mobility of labor and capital resources, poor government administrative and institutional capacity. Recently, the IMF and World Bank started to review their policy; in the light of this they modified and introduced new programs (PRSPs) for low-income countries. However, more revision is needed regarding the stringency of its monetary and fiscal policy packages to ensure that any recommendations for these policies consider the capacities and the circumstances of the developing countries, or even the difference in the circumstances of each individual country.

Endnotes

- ¹ In 1989, Johan Williamson coined the phrase Washington consensus as a descriptive term to refer to the policy advice being addressed by the Washington-based institutions to Latin American countries. For further details, see Williamson (1990) and Snowden (2001).
- ² Commercial banks credit had become much more attractive to Third World, mainly because the banks were awash with petro-dollars and because of borrowing facilities from these banks to Third World countries.
- ³ The real interest rates increased from an average of 1.3 per cent between 1973-1980 to an average of 5.9 per cent during 1980-1986, see Toye (1994: 20).
- ⁴ Nontradables are goods and services whose prices are determined domestically because these are not easily bought or sold outside the country, for example, transportation, construction and retail trade, household services. Tradables are goods and services whose prices are determined by world supply and demand and include both exportables and importables.
- ⁵ For more details on the complete macroeconomic frameworks or (identities) of the Polak model, see, Rao and Nallari (2001: 32-40).
- ⁶ For more details for that process, see, Tarp (1993: 59-75).
- ⁷ The formulation of SAP targets is based on the assumption that there is a stable demand for money function. Empirical studies on the demand for money in Arab countries including Jordan support this assumption [Tahir, 1997a: 26-46].
- ⁸ For details on open economy macroeconomics policy based on Mundell-Fleming model, see, Ugur (ed.) (2002: 3-30). Also, Husted and Melvin (2000: 523-535).
- ⁹ Interest rate changes and other financial reform have been suggested under SAPs policies. This topic will be discussed in section 3.4.4.
- ¹⁰ In Jordan for instance, raising the reserve requirements of commercial banks is the most powerful and effective policy instrument available, see Al-Smadi (2000: 174-184).
- ¹¹ This link occurs because changes in the money supply (equal changes in credit to the government, changes in credit to the private sector and variations in international reserves). Therefore, in developing countries where the financial markets are underdeveloped the government has to rely on bank credit for its financing needs so there is a close correspondence between deficit and changes in the supply of domestic credit.
- ¹² One common explanation for the inflationary consequences of fiscal deficits in developing countries is the lack of sufficiently developed domestic capital markets that can absorb newly issued government debt.
- ¹³ The issue of the effect of government borrowing on interest rates is by no means settled in the literature, for a comprehensive treatment of this literature. See, Bernheim (1989: 55-72).

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- ¹⁴ This topic will be explained in 3.4.7 section.
- ¹⁵ For further discussion and empirical evidence whether devaluation induces relative price changes or not, see, Killick (1984).
- ¹⁶ In the presence of non-stationary variables, there might be what Granger and Newbold (1973) call a 'spurious regression', in which regression coefficients appear statistically significant and have a high R^2 even when the variables are, in fact, unrelated.
- ¹⁷ For further discussion to the alternative policies to devaluation, see Bird (1983: 461-481).
- ¹⁸ See Agenor and Montiel (1996).
- ¹⁹ For instance, Jordanian government is used to effect the productive sectors mainly, agricultural and industry through reducing interest rates in the loans toward those sectors.
- ²⁰ In Jordan, for instance, there are at least four leading Islamic Banks and institutions operating according to profit/loosing sharing system.
- ²¹ For deep conversation with Stiglitz, see Snowden (2001).
- ²² A member of donor representatives express about his understood to ownership saying "Ownership exits when they do, what we want them to do, but they do it voluntarily we want them to take ownership off course they must do what we want, if not, they should get their money elsewhere"! IMF (1998).
- ²³ For a discussion of the changes in the IMF's operational procedures, see killick (1995).

CHAPTER FOUR

ISSUES IN PROGRAM EVALUATION

4.1 Introduction

The proceeding sections aim to examine the effects of different policies derived from the structural adjustment program. This section intends to look at the general evaluation of the SAPs by reviewing the evidence that is available on the effects of stabilization and structural adjustment, paying special attention to the methodologies employed in evaluating the impact of these programs on the major macroeconomic indicators.

Over the past thirty years or so, there have been a number of empirical studies aimed at assessing the effects of the IMF and the World Bank programs; most of these studies are based on the cross-country empirical evidence. Although a number of previous studies have tried to evaluate the structural adjustment programs, there is no single approach agreed in evaluating the effectiveness of the SAP in countries concerned. Moreover, one cannot say with certainty whether such programs have been effective in achieving their objectives or not. The answer to this question turns out to be no easy task. Indeed, the literature on the IMF and the World Bank programs effects is dominated by obstacles in the way of arriving at firm evidence on the effects of structural adjustment program, these obstacles could be illustrated as follows [Killick, *et. al.*, 1992]:

- (i) The issue of program effectiveness is a broad and controversial one, mainly because the country under supported program is subject to many external shocks, such as changes in the terms of trade, the weather conditions or any external shocks, which will affect the country's performance to achieve the objectives of the program. Thus, measures of program effectiveness have to filter out these unanticipated exogenous shocks. Practically, it is difficult to distinguish between the effects of the program factors from a large number of other factor influences the macroeconomic performance of an economy.
- (ii) It is difficult to disentangle the effects of the policies in the IMF program and the effects of fund finance, which accompanies the programs.
- (iii) The degree of implementation or compliance on SAP policy conditions is different from one country to an other, so the effectiveness tests should ideally adjust for degree of implementation.
- (iv) Different measures to assess the SAP can produce different results, if not conflicting estimates of the quantitative impact of the program. Therefore, one should be careful and objective in interpreting the results and concluding remarks.

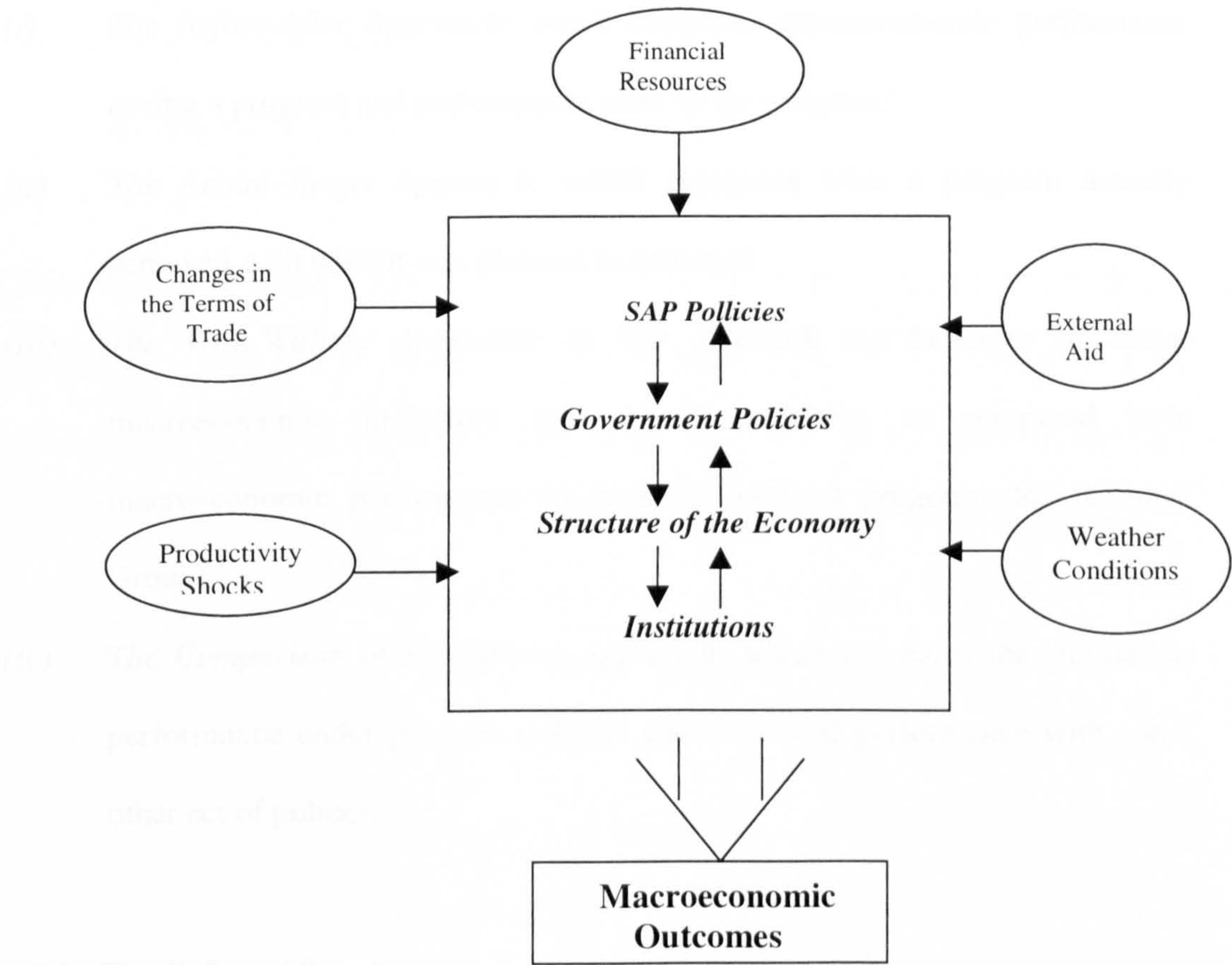
- (v) As the program results are often sensitive to the period of analysis, one issue here is whether the impact of SAP should be assessed only for the period of the programs or should extend beyond them.
- (vi) The counterfactual problem “What would have happened in the absence of the program” appears to be one of the critical issue in evaluating of the SAP. This is due to the importance of disentangle the consequences of the initial situation in countries concerned from the effects of the programs themselves¹.

To illustrate the concurrent and sometimes conflicting policies influences on effectiveness of programs Figure (4.1) shows that the country under structural adjustment programs is subject to different limitations. Firstly, the policy reforms and financial resources provided from the IMF and the World Bank. Both factors must interact with the structure of the economy and its institutions (internal factors) to act in way, which will yield the desired economic adjustment.

Secondly, while the country under SAP implementation, exogenous factors might affect the macroeconomic outcome in a way, which may help the operation of macroeconomic adjustment, but also it might work against the policy reforms causing negative results. Therefore, both the internal and the external factors should be taking into consideration in evaluating of structural adjustment programs.

Figure (4.1)

External and Internal Adjustment



4.2 Evaluation Methodologies

As previously mentioned, the answer to the question: Do the structural adjustment programs work? raised a number of empirical and analytical problems. However, in practice the literature suggests four distinct approaches have been applied to the evaluation of SAPs [Khan, 1990: 213]:

- (i) *The Before-After Approach*: which compares macroeconomic performance during a program and performance prior to the program?
- (ii) *The Actual-Target Approach*: which compares what a program actually achieved with what it was planned to achieve?
- (iii) *The With-Without Approach*: in this approach the behavior of major macroeconomic indicators in program countries is compared with macroeconomic performance in countries without programs the (Control Group).
- (iv) *The Comparison of Simulations Approach*: which compares the simulation performance under program policies and simulated performance with some other set of policies.

4.2.1 The Before-After Approach

This is the most popular approach, involving comparison of the value of variables before and after the implementation of an adjustment program. The major attraction of this methodology is that: it compares two sets of actual outcomes. Therefore, this approach is easy to carry out and seemingly objective. Moreover, it provides useful evidence especially when the results are statistically strong. However, the main

weaknesses of this approach is that changing or improvement over time in macroeconomic performance may be take place due to any number of exogenous factors and other non-program influence (involving external factors like terms of trade variations, international interest rates movements as well as shifts in weather conditions). Goldstein (1986: 3) emphasized that the before-after approach can be useful to show what happened in program countries, but not why it happened.² In other words, this approach attributes all of the change in outcomes between the pre-program and program period to program factors.

These limitations make it a poor estimator of the ideal counterfactual. However, this approach could be improved as pointed out by Khan (1990: 201), if one could make a judgmental correction for the influence of non-program factors that would possible improve upon the estimates of counterfactual, by doing so, it could be possible to distinguish between the effects of program factors from the possible effects of non program factors, particularly if this exercise carried out in single country.

Many researchers used this approach, the main studies, which applied this approach, are reviewed by Ul-Haque and Khan (1998). The first used this approach was in 1978 by the IMF staff Reichmann and Stillson (1978). They compared the behavior of the balance of payments; inflation and growth rates during the two-year periods before and after program in a total of 79 IMF supported programs implemented during the period 1963-1972. They found that there was a significant change in the balance of payments in only one fourth of all programs in a majority of cases over 70

per cent. In relation to growth rates, they concluded that these programs had no effects, while the impact on inflation rate was mixed.

The same procedure was also used by Connors in (1979) to examine 31 programs that were adopted during the 1973-1977. Connors compares the behavior of the main macroeconomic indicators during one-year comparison period rather than two. He found that the IMF programs had no noticeable effects on growth rate, inflation and current account deficit. Pastor (1987) also used this test for 18 Latin American countries during 1965-1981, using one-year comparison. Pastor concluded that the IMF programs led to a significant improvement in the balance of payments, but there was no effect on the current account, the inflation rate and the GDP growth.

A study by Corbo and Webb (1990) examined the effects of the World Bank structural adjustments in a number of countries that received the SAP lending during 1970-1984. Corbo and Webb, using before-after comparison, concluded that the World Bank programs had improved the export rates. The study also, observed a decline in the investment ratio to GDP in adjusting countries over the same period.

The most recent study used the before-after approach was by Killick, *et. al.* (1992) that updated and extended the earlier Killick (1984) study.³ They found in examining the effects of programs in 16 countries over the period 1979-1985, that the IMF-supported programs led to an improvement in the balance of payments, the current account balance and the growth rate, while inflation was reduced. It is worth

noting here that in this study the results were quite different from Killick's 1984 study. It is apparent that the results cited in most of these studies differ according to the length of comparison period and according to regions.

4.2.2 The With-Without Approach

The use of this approach is often intended to overcome some of the limitations of the before-after approach by comparing the experience of adjusting and non-adjusting countries (Control Group) over the same period. Thus, it is implicitly based on *ceteris paribus*, assumption that all countries are differentiated only in terms of having or not having an adjustment program. In particular, the external environment as well as the economic structure is assumed to be alike in both program and non-program countries. Moreover, the with-without approach also requires that each country exhibit highly similar performance in the pre-adjustment period. Such assumption does not exist, partially since adjusted countries are more likely to have experienced poor economic performance in the pre-program period than non-adjusted countries.

Goldstein and Montiel (1986: 321) argued that a comparison of mean macroeconomic outcomes between program and non-program countries will, under reasonable assumptions, overemphasize the beneficial effects of program with respect to the IMF and World Bank program. Basically, the non-random selection of program countries means that with-without estimates of program effects may be biased. Mainly because under non-random selection the with-without estimator

attributes difference in outcomes exclusively to program status, when in fact the difference in starting positions itself is a cause of differences in subsequent performance between the two groups.

Despite, the shortcomings of the with-without approach, many researchers rely upon this approach to evaluate the effect of the SAP. Khan (1990) indicated that the first to use the with-without approach was Donovan (the IMF staff) in two studies in 1981 and 1982. In the first study, Donovan (1981) examined 12 programs implemented in 12 countries during 1970-1976. The outcome for growth was not clear cut, while in one-year comparisons there was a sharp improvement in economic growth in program countries relative to the non-program countries. In the three-year comparisons economic growth fell in program countries by more than it did in non-program countries. In terms of exports Donovan found that the improvement in the growth rate of exports was higher in program countries irrespective of time comparison. The inflation rate also rose at a slower rate in program countries.

Donovan (1982) undertook a similar exercise as in 1981 for an expanded sample of 78 programs covering the period 1971-1980. The results indicated relative improvement for program countries in the ratio of the current account to GDP, the ratio of the overall balance of payments to exports and the rate of inflation. However, the growth performance fell by more than the average decline experienced by non-program countries in the one-year comparisons, but by less in the three year comparisons.

To overcome the weakness of with-without approach, Gylfason (1987) carried out a study for 32 programs implemented during 1977-1979, taking as a control group a set of non-program countries that had experienced economic difficulties, mainly balance of payments difficulties. A non-parametric statistical test was used to determine if the behavior of the macroeconomic variables for program countries was significantly different from that of the control group. The results indicated that program countries experienced statistically significant improvement in the balance of payments of the control group. However, there was no significant difference between program countries and the control group in case of real growth rate. In relation to the inflation rate Gylfason's results indicate that it remained approximately the same as the average rate of inflation in the control group.

Mosely, *et. al*, (1995) used the with-without approach to evaluate the impact of the World Bank adjustment in 25 LDCs that received the SAPs during 1980-1987. The evaluation indicated that countries implemented SAPs have achieved better trade performance, worse investment rate and a diverse effect on GDP growth rate relative to non-program countries.

Now, whether applying both approaches, the before-after and the with-without approach to the same sample might yield different outcomes. Corbo and Webb (1990) used the with-without method for the same period to the same sample by comparing the performance of the countries receiving such programs. In general, they found that with-without approach like before-after approach suggested that

countries implemented World Bank structural adjustment have achieved more positive macroeconomic performance.

The empirical analysis applied by Goldstein and Montiel (1986) to a sample of 68 countries was called Generalized Evaluation Estimation (GEE). In this approach, they firstly test the program countries performance in the pre-program period and they found that program countries systematically demonstrated weaker performance, higher inflation, slower growth and balance of payments deficits. Having they adjust for these differences in performances between program and non-program. Goldstein and Montiel using regression analysis estimate the program effects and they found that there were no statistically significant effects of programs on the economic growth rate, balance of payments or on the rate of inflation.

Ul-Haque and Khan (1998) indicated to a recent study by Dicks-Mireaux and Schadler (1997) covered the period 1986-1991 which concluded that the SAP do reduce inflation rate, on the other hand, they found that the implementation of a program led to an immediate improvement in growth rate and this effect was found to be statistically significant. It is worth noting that most of studies which applied the GEE approach were in favor of improve the current account and reductions in inflation rate, but there were different results regarding to economic growth rates.

4.2.3 The Actual -Target Approach

This approach compares actual outcomes under the IMF and World Bank program with targets set inception of the program. Therefore, this methodology is useful in a situation where the objective of the evaluation is to examine why the targets were not achieved. This approach has not been as frequently used as the other approaches, mainly because its reliance on confidential information on program targets that only the country authorities and IMF staff has access to [Khan, 1990: 205]. However, the IMF's policy in recent years has changed, now it is allowed to public members to have access to Letter of Intent, which describes the policies and targets that the adjusting country intends to implement in the context of its request for financial support from the IMF. This document is being made available on the IMF website.

The main studies that used the actual-target approach as reviewed by Khan (1990) are Reichmann (1978) the IMF staff, studied 21 programs during 1973-1975. He found that the balance of payments targets were met or exceeded in nearly two thirds of the programs, while the inflation targets were exceeded in over half of programs and 62 of programs met their growth targets. Beveridge and Kelly (1980) focused in their study on intermediate targets (domestic credit expansion, government revenues, expenditures and deficit financing). Their results showed that a short fall in revenues occurred in about 40 per cent of the cases and 60 per cent of the programs achieved the expenditure targets. Consequently, the overall fiscal deficit targets were achieved in only about half the programs, as were the domestic credit ceilings, government

were more successful in meeting domestic non-bank financing limits than foreign financing targets.

Finally, Zulu and Nosouli (1985) studied a number of the IMF programs that were implemented in African countries during 1980-1988. They found that the current account targets in about 48 per cent were met, while targets for the growth rate were met only in less than 20 per cent of the cases.

Indeed, the actual-targets approach also has its drawbacks as the other approaches; the main weakness of this methodology is that the target values embody forecasting errors. In this regard Mosley (1987) argued that the targets in World Bank structural adjustment are merely guesses. Taylor (1988) and Kenan (1986) argued that the IMF consistently under-estimated the inflation rate and over-estimated the growth rate in 1980s for the 17 countries, which his study covered.

Another weakness of this methodology is such approach carries a high element of subjectivity with possibility that results are affected by any tendency towards over-ambition or under-estimate in program targets. So in the eyes of the evaluator it is possible that to consider the program as under-performance in the first case as program's targets too ambitious and thus extremely difficult to achieve and over-performance in the second case.

In general, this approach still yield useful information in relation to the extent of which the SAPs achieved their own targets and to sheds light on how the country's macroeconomic performance was affected by a IMF and World Bank supported program.

4.2.4 The Comparison of Simulations

This approach is based on policy models of the behavior of a group of economies or a single economy. It relies on simulations of economic models to infer the hypothetical performance of policy packages mostly the IMF-type policies and alternative policy packages. Khan (1990) argued that this approach carries some advantages. First, under this approach one can draw on a wider body of adjustment experience since the data base need not restricted to countries with IMF-supported programs. Second, the policy simulations are specified, one does not have to worry that incomplete implementation of policies will blur the results.

Like other approaches the comparison of simulations has some important problems. The usefulness of such approach depends on the appropriateness of the model used. Whereas there is as yet no single model available that covers the whole range of policy measures contained in a typical SAP, this approach is the most time consuming of all four approaches since it requires model building. Moreover, Killick, *et. al.* (1992: 578) argued that the danger of this approach is that the results reflect model specification rather than reality.

The main studies, which applied this approach, are Khan and Knight (1982 and 1985). They used this approach twice, the first in 1982 for sample of 29 developing countries and the second in 1985 they extended their simulation analysis to a comparison of alternative policy packages. The simulation experiments in the first study showed that the IMF program produced a sharp price deflation in the first year. Then a temporary burst of inflation in the following years. Also, in the first year there was contract in the output followed by rose temporary about its full-employment level.

The second study (1985) showed that the balance of payment improved almost immediately, but at the expense of temporary higher rate of inflation and a short-run reduction in economic growth. However, the long-run effects on inflation, economic growth and the balance of payment were more favorable than the short-run effect.

It is worth noting here that although all the previous studies, which have tried to evaluate the IMF and World Bank programs, are based on a large multi-country studies, there are some case studies which focused on individual country experience. Indeed, any effective assessment of these programs requires a comprehensive country-by-country analysis. This is because each individual country has its own political and social environments and both the internal and external factors of each country need to be taken into consideration.

Ul-Haque and Khan (1998) emphasized that case studies approach as opposed to multi-country studies permit one to delve more deeply into program implementation. Goldsbrough, *et. al.* (1996: 1) argued that case study analysis offers ability to examine the effects of policies in the context of complex economic and institutional setting that can not be captured using cross-section studies. In general, a case study approach can avoid the various approaches disadvantages and can go much further in explaining the reasons behind the results obtained.

However, case study has disadvantage, it is difficult to generalize from the findings of country case studies. On the other hand, in single country version the hypothetical counterfactual scenario poses number of procedural obstacles and do not offer a full confidence of what would have happened in the absence of the program. Mainly because the target values that are contained in alternative policies, such as a government plan may differ significantly from what would have happened in the absence of actual SAP. The same thing can say in case of an optimal set of policies, which is also subjective matter. To sum up, Table (4.1) offers comparison between case study approach and the other approaches.

As the aim of this study is to evaluate the Jordanian experience under the structural adjustment programs, it might be useful to point out to the main studies, which have tried to assess individual country experience. Iqbal, *et. al.* (2000) used simulation methods to evaluate adjustment policies in terms both the direct and indirect effects that they may have had in Pakistan. Iqbal's statistical evidence obtained from the

regression and simulation results found that the overall economic performance is indeed improved under the IMF and the World Bank packages.

Also, in Pakistan McGillivray, *et. al.*, (1995) provide a methodological review of pre-existing studies of the effects of adjustment on macroeconomic performance. They argued that the more appropriate method is econometric modeling, due to its ability to control for the influence of non-adjustment program factors on macroeconomic performance. McGillivray, *et. al.*, apply more rigorous econometric modeling techniques to Pakistan's economy. In general, their results suggest that adjustment has had little causal effect on Pakistan's macroeconomic performance. In relation to inflation, adjustment program seems to have had a beneficial impact on inflation rate during the SAP period.

In the case of Morocco, to evaluate the effects of the World Bank policies over the period 1980-1986, the model used in the counterfactual analysis was a standard Computable General Equilibrium model (CGE). The results prove that World Bank policy package have a positive impact on the GDP and exports, however, it was found that further liberalization of capital controls appears to have an export-depressing effect [Mosley, *et. al.*, 1995].

Karingi and Siriwardana (2001) try to evaluate the effects of some policies recommended, namely fiscal adjustment and trade liberalization, by the World Bank and the IMF in the Kenyan economy, using a the CGE model. Whereas the Kenyan

government has implemented only part of these recommendations, the researchers used alternative fiscal austerity measures and investigate the question of trade liberalization through the lower tariffs. Although the results do not support the application of that option in respect to GDP, investment, employment and balance of payment, they suggest that fiscal austerity through raising indirect taxes and trade liberalization supported by foreign inflows achieve the best overall outcomes.

Finally, Foulo and Grafton (1998) evaluated the 1988-1990 structural adjustment program in Lesotho using Computable General Equilibrium model. The results suggest that the SAPs worsened the balance of payments, do not necessarily hurt wage earners and how the SAPs are applied is crucial in determining distributional outcomes.

4.3 Conclusion

In conclusion, the answer to the question of the successful of structural adjustment programs raises a number of difficult statistical and analytical problems. Therefore, evaluation the effect of SAP is not an easy task, which is one reason why there has been controversy on this issue. Although, one can say from the proceeding sections there is no ideal approach to assess the SAP, one should not stop evaluating this program but rather to be careful and objective when doing so. Particularly sometimes different approaches can produce different if not conflict results of the quantitative impact of the program. Consequently, one should be careful to recognize the limitations of these approaches as well as in interpreting its outcomes.

In summary, the available empirical evidence suggests that the IMF and World Bank structural adjustment programs have had positive impact on the balance of payment, negative effect on investment, varied effects on the current account and no visible effect on inflation and economic growth. Table (4.2) offers a summary of empirical evaluation of the effects of the IMF and World Bank programs reported in this chapter and in the existing literature.

Table (4.1)
Uses and Limitations of Alternative Tests of the SAPs

A-Program Results	Before-After	Target-Actual	With-Without	Comparison of Simulations	Generalized Evaluation	Case Study
Does the program improve On the initial situation?	Yes	Yes	Yes	...	Yes	Yes
Do program countries do better than non-program?	...	...	Yes	Yes	Yes	...
Does program improve upon likely alternative outcomes?	Weak	Weak	Debatable		Yes	Yes
Are program effects secured	...	Weak	...	...	Yes	Yes
Can the results be generalized	...	...	Debatable		Yes	Weak
B-Result Determinants						
Influence of exogenous factors	Weak	...	...	Yes	Yes	Yes
Program implementation	...	...	...	...	Weak	Yes
Impact on instrument Variables	...	Yes	...	...	...	Yes
Impact on financial flows	...	...	...	...	...	Yes

Source: The origin of this table in Killick, et. al., (1992).

- Key: **Yes** = The test provides useful information
Weak = The test is weak
Debatable = There is disagreement amongst the researchers

Table (4.2)
Summary of Empirical Evaluations of the SAPs

Study	Time period	Number of Countries	Balance of payments	Current Account	Inflation	Growth Rate	Investment
Before-After							
Reichman & Stillson (1978)	1963 - 72	...	0	...	0	+	...
Connors (1979)	1973 - 77	23	0	0	0	0	...
Killick (1984)	1974 - 79	24	0	0	-	0	...
Zulu & Nsouli (1985)	1890 - 81	22	...	0	0	0	...
Pastor (1987)	1965 - 8	18	+	0	0	0	...
Corobo & Webb (1990)	1970 - 84	...	...	...	...	+	-
Schadler, et al. (1993)	1983 - 93	19	+	-	-	+	-
Killick, Mailk & Manuel (1995)	1979 - 85	16	+	+	-	+	...
With-Without							
Donoven (1981)	1970 -76	12	...	...	-	+	...
Donoven (1982)	1971 -80	44	+	+	-	-	...
Loxley (1984)	1971 -82	38	0	0	-	0	...
Gylfason (1987)	1977 -79	14	+	...	...	0	...
Corbo & webb (1990)	1970 -84	...	...	...	...	...	-
Mosely,Harrigan &Toye (1991)	1980 -87	25	...	+	...	-	-
Generalized Evaluation							
Goldstein & Montiel (1986)	1974 - 81	58	-	-	+		...
Khan (1990)	1973 - 88	69	+	+	-	-	...
Corbo & Rojas (1991)	1970 - 88	77	...	+	...	-	-
Conway (1994)	1976 - 86	73	...	+	-	+	...
Bagci & perraudin (1997)	1973 - 92	68	+	+	-	+	...
Dicks-Mireaux,et al. (1997)	1986 - 91	74	...	...	-	+	...
Simulation							
Khan & Kingth (1981)	1968 - 75	29	+	+	-	-	...
Khan & Kingth (1985)	1968 - 75	29	+	+	-	-	...
Case Study							
Iqbal (1997)	1970 - 93	Pakistan	+	+	...	+	+
McGillivray & Ahmed (1991)	1978 - 94	Pakistan	...	...	+	...	-
Mosely,Harrigan &Toye (1991)	1980 - 86	Morocco	...	+	...	+	...
Foulo and Grafton (1998)	1988 - 90	Lesotho	-	...	...	...	...

Source: The origin of this table in Ul-Haque and khan (1998).

Key + Indicates positive effect
 - Indicates negative effect
 0 Indicates no effect

Endnotes

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- ¹ Most of countries adopting the SAP are often in crisis immediately beforehand and in the short-run from the program implementation.
 - ² This conclusion based on that the evaluation exercise carried out only by compare the macroeconomic indicators before and after the program.
 - ³ Killick (1984) employed non-parametric statistics and regression analysis to gauge the effects of 38 programs during 1974-1979. His results showed that balance of payments and current account deteriorated, inflation was reduced and that economic growth was higher in the first year but was eroded in subsequent years. See Ul-Haque and Khan (1998: 14).

CHAPTER FIVE

JORDAN'S SAPs: OBJECTIVES AND POLICIES

5.1 Introduction

For nearly three decades, the IMF and World Bank have been sponsoring stabilization and structural adjustment programs in developing countries. These programs, broadly speaking, aimed at meeting the country's principle macroeconomic objectives. In Jordan, since 1989, the country has undertaken considerable stabilization and adjustment reforms, which have been supported by the IMF, World Bank, and bilateral donors. Before undertaking assessment of the macroeconomic effects of the SAPs, this chapter, mainly will describe in detail the main components of the SAPs (objectives and policies) which were implemented in Jordan under the supervision of the BWIs. The rest of the chapter is divided into several sections. The next two sections will present a brief background on the IMF and the World Bank and their relationships with Jordan. Thereafter, the chapter presents the main objectives and policies of Jordan's SAPs. Finally a primary assessment of Jordan's SAPs will be also given at the end of this chapter.

5.2 Jordan's Experience with SAPs

Jordan enjoyed an unprecedented growth in its income and expenditure during 1973-1984, boosted by the flow of foreign aid, loans and workers' remittances from traditional regional Gulf countries. But this boom unfortunately, ended in the mid 1980s, as a result of the rapid decline in the oil price and the subsequent slowdown in

regional economies. As a consequence, Jordan experienced a radical slowdown in its growth rate and severe fiscal and external account deficits, which became more pronounced after 1986, unemployment and poverty also increased. The government responses to these developments indeed aggravate the economic problems leading the country into serious economic crisis. According to Maciejewski and Mansur (1996: 7), the government dealt with the shortage in foreign aid flows by:

- (i) Expanding public spending financed by external commercial and domestic bank borrowing in order to stimulate domestic aggregate demand. This increased the already large budget deficit. The result was high inflation, a worsening of the current account deficit and rapidly increasing foreign debt. By the late 1980s, Jordan's debt services were some 45 per cent of total exports. Furthermore GDP growth had turned negative.
- (ii) Maintaining domestic price stability through the regulation of prices. As a result there was a rapid acceleration in the external debt service burden, which led to the emergence of serious financial imbalances.

By 1988, these imbalances had reached unsustainable proportions where general financial instability led to bank failures and a reduction in private capital inflows. In this regard, the banking crisis emerged for three main reasons: inadequate banking regulations, overexposure of the banking system to real estate markets and, more importantly, imprudent speculation on the foreign exchange markets. These

circumstances resulted in the collapse of a major bank (Batra Bank) in 1989, the third largest banking institution in Jordan, together with the emergence of financial difficulties in six other financial institutions [*ibid*: 39]. This deteriorating macroeconomic environment reflected in aggregate investment declined to some 22 per cent of GDP. Jordan in that time had become one of the most heavily indebted countries in the world with its ratio of external debt to GDP increasing to 193 per cent.

As a consequence of the growing budget deficits, which created new financial distortions such as regulated interest rates and increasing monetization, the situation was clearly unsustainable. Reserves were depleted and the exchange rate depreciated by 50 per cent by the end of 1989. This was the first step in the implementation of corrective macroeconomic policies under the supervision of the IMF and World Bank as in a last resort to tackle the economic crisis.

In mid 1989, Jordan initiated an economic reform program, mainly to restore growth and reduce the macroeconomic imbalances, which the World Bank supported with adjustment loans complemented by a macroeconomic stabilization program supported by an IMF Stand-By Arrangement. This became known as the first correction program for the period 1989-1993. But this program lasted for just 15 months as the country and the whole region were affected badly by the first Gulf war in 1991. However, the government soon resumed its reform efforts in early 1992. A new agreement between the Jordanian authorities and the IMF and the World Bank

was concluded for a new comprehensive structural adjustment program covering the period 1992-1998.¹ In addition Jordan applied third phase of SAP covering the period 1999-2001.

It is clear from the above that not all of Jordan's economic crises were due to external factors. In fact, the government's response to the deteriorating external shocks exacerbated the situation, as the subsequent decline in foreign aid in the early 1980s was not matched by substantial budgetary cutbacks. According to El-Said (2000), even though the advice of foreign and local economists, to tackle the problem, called for austerity measures from the early 1980s, the government followed an expansionary policy based on running down reserves and increasing foreign borrowing. El-Said (2000:10), explains that the government indeed responded to the pressure from the business community and connected businessmen whose interests and profits were threatened by a regional and local recession that reduced demand for their products. More details on how main macroeconomic variables behaved before the SAPs will be presented in the next chapter.

5.3 Jordan and the World Bank

The World Bank officially the -International Bank for Reconstruction and Development- was established by the 1944 Bretton Woods Agreement along with the IMF. The World Bank's adoption of structural adjustment through conditionality was in the era of Robert McNamara, the Word Bank President, who in 1979 first proposed conditionality, which he described as:

“The ideal of encouraging economic growth and development by linking financial assistance of the adoption of particular set of policies recommended by the World Bank” [Pender, 2001: 399].

Although the Bank still engaged in a great deal of project lending much of that was centered on improving infrastructure maintenance and commitments to reforming state enterprises. The main objective of the World Bank, however, is to focus on long-term economic development and poverty reduction issues. Indeed, the Bank’s evolving outlook poverty has become the core issue in the Bank’s agenda. The World Bank declares in its website “Our Mission is a World Without Poverty”.

The World Bank consists of two institutions making loans for development: the International Bank for Reconstruction and Development (IBRD) which makes loans for middle-income and creditworthy poorer countries, and the International Development Association (IDA) which makes interest-free loans to the 78 poorest countries, where average incomes are less than US\$ 500 per year. The Bank is owned and governed by its 183 member countries, who are also members of the IMF.

Unlike the UN, the Bank’s governing body was not set up on a ‘one-country one-vote’ basis but rather gave a disproportionate vote to the richer nations, the major contributors. Indeed, a country’s share is based on the size of its economy, the USA is the shareholder with 16.41 per cent of votes, followed by Japan 7.8 per cent, Germany 4.4 per cent, United Kingdom 4.31 per cent and France 4.31 per cent. The rest of the shares are divided between other member countries.

For nearly 40 years Jordan and the World Bank have been partners in development. Jordan joined the World Bank in 1952 and received its first International Development Aid (IDA). Credits and loans have been granted to Jordan for a total amount of US\$ 536.7 million. Figure (5.1) shows the World Bank lending in Jordan, which mainly concentrates on macroeconomic adjustment 32 per cent of the World Bank lending and 30 per cent for the Energy and Mining sectors. Table (5.1) represents the commitments and disbursements of the World Bank-supported projects to Jordan under the SAPs for the period 1993-2001.

It is worth noting that the cooperation between the Bank and Jordan remained limited on Bank-supported projects such as education, health care and infrastructures until 1989 when the Bank began to support Jordan to enhance the macroeconomic stability and structural reform under structural adjustment loans. This was by providing non-project assistance in the form of policy loans, analytical studies, policy recommendations, training and institutional development which are designed to spur on development in Jordan.

According to World Bank (1998: 6) the central objective of the World Bank's assistance to Jordan is to promote rapid and sustainable outward orientated growth. However, there are sub-objectives associated with this overall theme, as the World Bank refers to as in the following:

- (i) To support the macroeconomic transition taking place and to assist the government as it builds a market-responsive private sector capable of creating thousands of new jobs, while offsetting the temporary social adjustment likely to occur as Jordan continues its process of trade liberalization, privatization and financial and regulatory reform.
- (ii) To help the government address infrastructure constraints while encouraging environmentally sound investment practices by providing investment loans and other forms of assistance in key sectors of the economy such as water, energy, telecommunications, transportation, tourism, agriculture and natural resource management.
- (iii) To support the government's attempt to reduce poverty through targeted investments and to continue its efforts of ensuring quality access to education and health care for all Jordanian.

The partnership between Jordan and the World Bank reached its peak when James Wolfensohn the World Bank President visited Jordan in 2003. He described relations with Jordan as the best in the Middle East and North African region. The World Bank President in his visit held talks with the King and top officials on the progress in implementing ongoing bilateral projects. He also met a number of private sector and civil society representatives in an open dialogue. Wolfensohn said at the conclusion of two-day visit that Jordan can count on World Bank support and

real partnership to brave the storm of a war in Iraq and confirmed it will invest just under US\$ 400 million in development projects in Jordan over the period 2003-2005, under the recently announced Country Assistance Strategy (CAS)” [Sawalha, 2003].

It is worth noting that the CAS will focus on education and public sector reform as well as other national development priorities. The CAS complements the government’s efforts to fight poverty by adopting five main objectives [World Bank, 2002]:

- (i) Promoting human development.
- (ii) Improving governance through public sector reform.
- (iii) Enhancing conditions for growth led by the private sector.
- (iv) Addressing resource conservation and exploitation.
- (v) Gender inclusion in development planning analysis.

The World Bank Group has been actively assisting the Jordanian government, through the Executive Privatization Commission (EPC) in crafting a privatization strategy, designing an institutional framework for implementing the program and supporting the implementation of the program. In a recent report, the World Bank considered the Jordanian privatization program “as one of, if not, the most successful programs in the Middle East region” [World Bank, 2001: 1]. To date the following main projects have been privatized:

- (i) The Jordan Cement Factories.
- (ii) The Public Transport Corporation.

- (iii) Ma'an Spa.
- (iv) The Jordan Telecommunications Corporation.
- (v) The Water Management for Grater Amman Area.
- (vi) Aqaba Railway.

The result has been that the government was divested of its shares in approximately 44 companies worth approximately US\$ 113 million. Total proceeds are in excess of US\$ 900 million. Moreover, the ongoing projects include: Royal Jordanian Airlines, Jordan Phosphate Mining Corporation, Postal Services, Electricity Sector, Petra Drilling Corporation, Royal Jordanian Air Academy and Customs Department Warehouses. They are scheduled for completion by the end of 2003. The World Bank on the other hand, helped Jordan through the CAS with its technical assistance in improving the policy design for poverty alleviation.

5.4 Jordan and the International Monetary Fund

In 1945, 29 countries signed the Bretton Woods Agreement, which established the IMF to maintain exchange rates for international free trade. Today it is a universal financial institution, having grown from the 44 states represented at 1944 Bretton Woods Conference to 182 countries. It includes almost every economy in the World. The IMF's operations are very general and are laid down in the first Article of Agreement as follows²:

- (i) To promote international monetary co-operation through a permanent institution which provides the machinery for consultation and collaboration on international monetary problems.
- (ii) To facilitate the expansion and balanced growth of world trade, and to contribute thereby to the promotion and maintenance of high employment and real income and to the development of the productive resources of all members as primary objectives of economic policy.
- (iii) To promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive devaluations
- (iv) To assist in the establishment of a multilateral system of payments in respect of current transactions between members, and in the elimination of foreign exchange restrictions, which hamper the growth of world, trade.
- (v) To give confidence to members by making the general resources of the fund temporarily available to them under adequate safeguards, thus providing them with the opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity.

- (vi) In accordance with the above, to shorten the duration and lessen the degree of disequilibrium in the international balance of payments of members.

Membership requires a contribution to the IMF called a country's "quota" the size of which depends on the size of the member's economy. A member-country can freely draw up to 25 per cent of its quota to address balance of payments deficits. However, to draw on more than 25 per cent, according to Article I, requires a special agreement with the IMF. The IMF attaches to these loans conditions (Conditionality), which oblige countries to undertake specific policies in order to receive the loan installments (SAPs). Indeed, there are three main types of IMF agreements as illustrated in IMF (2002b) as follows:

- (i) The Stand-By Arrangement (SBA) is the core of the IMF's lending policies and they were first introduced in 1952 to provide assurance to a member country that it can draw up to a specified amount, usually over 12-18 months, mainly to deal with a short-term balance of payments problem. According to the IMF, the term "Stand-By" means that subject to conditionality, a member has a right to draw the money made available if needed.
- (ii) The Extended Fund Facility (EFF) is intended for countries with BOP difficulties related to structural problems. It provides assurance to a member country that it can draw up to a specified amount usually over 18 months.

- (iii) The Poverty Reduction and Growth Facility (PRGF), which replaced the Enhanced Structural Adjustment Facility (ESAF) in 1999, is designed to help the poorest member countries. Most (PRGF) or (ESAF) cases were with Sub-Saharan African countries and former planned economies facing protracted balance of payments problems.³

Polak (1991) describes the differences among these arrangements as they relate to the conditions, timing and size of the loan disbursements. However, Polak notes that the fundamental objectives of these programs do not differ.

The IMF is owned by the government of its member countries as represented through a Board of Governors. The voting systems is in accordance with the size of a country's share-holding (quota), consequently, the United States is the largest member of the IMF, currently with 17.78 per cent of the vote alongside the other largest members of the IMF.

Jordan joined the IMF in 1952 and the first dealing with the IMF was in 1983 when the country withdrew 16.6 million Special Drawing Right (SDR).⁴ In the year after Jordan bought 7.4 million SDR and in early 1985, Jordan used 5.7 million under the Compensatory Financing Facility (CFF). In 1989, Jordan signed the first structural adjustment program getting 40 million SDR units under the Extended Fund Facility (EFF) arrangement to compensate for the losses in its export earnings and workers' remittances [Al-Wazani, 1994b]. The IMF statistics show that Jordan got 200.8

million SDR units during the period 1996-1998 [IMF, 1996 and 1997a]. Table (5.2) shows Jordan's position in the IMF as of 2003.

5.5 Structural Adjustment Program 1989-1993 (SAPI)

A topical SAP begins with an explicit request from the authorities of a member of the IMF and the World Bank. In Jordan case, both the World Bank and IMF responded to the Jordanian authorities' request (the Ministry of Finance and the Central Bank of Jordan) by sending their help to Jordan in April 1989. With regard to the IMF's program, the literature explains the process of an IMF-supported program as described by Mussa and Savastano (1999: 9). A program begins with a request from a member. The IMF staff then prepares a blueprint of a program that is used as the basis for negotiations. The outcome of the negotiations is summarized in a "Letter of Intent" which declares the main objectives of the program, the policy actions and reforms that the authorities have taken or intend to take and the arrangement itself. When agreement is reached, it is then approved by the IMF Executive Board.

Monitoring is the largest phase of the IMF program, involves checking and keeping track of the timely implementation of policy measures agreed and the numerical and structural performance criteria and benchmarks of the arrangement. Completion is the final stage in the program, which usually does not imply that the numerical targets of the country's program have been met.

According to Mussa and Savastano, completion of an IMF-supported program does imply that, in the IMF's view, the country has made substantial and satisfactory progress towards the primary objectives of its adjustment program (especially external viability) and that the policies of the authorities were broadly in line with the understanding reached with the IMF during the life of the arrangement. The programs do not always follow the above described formulae, however, as the country might be unable to comply with one or more performance clauses at some point during the arrangement, so in this case the program is suspended permanently or temporally.

In this context, following Jordan's request for financial support from the IMF, the government issued Letter of Intent, which described the policies that Jordan intended to implement during the program. Both institutions agreed to create an enabling environment for long-run sustainable growth by improving the efficiency and competitiveness of the economy. In the following sections objectives and policies of the first Jordanian SAPs will be presented:

5.5.1 The Program Objectives

In general, the main objectives of Jordan's SAP_I are to correct the structural imbalances, maintain high level of growth and monetary and fiscal stability. The objectives of the SAP_I can be summarized as follows [Jaradat, 1994: 57-58]:

- (i) Achieving a progressive increase in the real GDP growth rate to increase in real terms from -3.5 per cent in 1988 to 4 per cent in 1993.

- (ii) Reducing the current account deficit to reach a balanced state by the end of the program.
- (iii) Lowering the inflation rate.
- (iv) Tackling the expected negative social impacts by recommending some policies and procedures to protect vulnerable groups.
- (v) Reducing the budget deficit.
- (vi) Achieving stability in the Jordanian Dinear (JD) exchange rate by rebuilding the level of official foreign reserves.

Moreover, the program included a group of general intermediates and structural reforms aims, such as reducing balance of payment deficit, domestic credit ceilings, raising domestic savings, increasing investments, debt rescheduling and openness policy. In general, Table (5.3) summarizes the main targets of the first structural program 1989-1993.

5.5.2 The Program Policies

To achieve these objectives, integrated fiscal, monetary, trade and sectoral policies were introduced. These policies summarized in [ibid, 1994] as follows:

(A) *Fiscal Policy*: the central issue of macroeconomic adjustment was the fiscal deficit. The program aimed at reducing the fiscal deficit gradually from 22 per cent of GDP in 1988 to 10 per cent of GDP in 1993. In relation to revenues, the program aimed to increase domestic revenues by:

- (i) Broadening the tax base and reducing tax exemption.
- (ii) Increasing consumption tax on some commodities and including other commodities in this tax.

In relation to expenditures, the aim was to reduce both capital and current expenditures by:

- (i) Reducing the public sector's employment and keeping real wages and salaries low in this sector.
- (ii) Reducing military spending.
- (iii) Controlling social spending, mainly health and education expenditure.

(B) *Monetary Policy*: money and credit were essentially geared toward stimulating domestic economic activity. Accordingly, the program includes policies to stabilize the JD exchange rates and control inflation by:

- (i) Floating interest rates to ensure the availability and efficient allocation of credit and to attract the capital inflow of workers' remittances and the return of local capital from abroad.
- (ii) Controlling credit growth rate and money supply.

(C) *Balance of Payment Policies*: these policies aimed to eliminate the balance of payment deficits through reduced current account deficits and trade deficits. This is to be done by adopting an elastic exchange rate policy reflecting the developments of

the balance of payment and foreign reserves at the central bank. The program, also recommended increasing the exports of goods and services and reducing imports. Moreover, the program emphasized debt rescheduling with the donor and improving the external debt profile over the longer run. According to the program, the government has to remove all its obligations during the program period by paying or rescheduling principle and interest for all its debt. Interestingly the program recommended to the Jordanian authorities to accelerate its efforts to insure aid and other external fund.

(D) *Sectoral Policies*: these policies carried out mainly by the World Bank to improve the supply side of the economy. They emphasized a reduction in the role of the government in direct production and a rationalization role for the public sector in economic activities, to enable them to work on a commercial basis as a first step toward selling them to the private sector. In addition to this, there were other recommendations, for example, in the agricultural sector, there were recommendations to eliminate the subsidization of agricultural inputs gradually and to increase irrigation water prices to cover their average operational and maintenance costs and through progressive pricing to improve the investment environment. Moreover, the World Bank emphasized the elimination of trade restrictions and amending the customs tariff structure.

(E) *Policies for Protecting Vulnerable Groups*: the program's approach to protect the poor during the adjustment program includes the following procedures:

- (i) Restructuring public expenditures with a view to protect essential social services. Thus while military spending and fiscal outlays for generalized price subsidies were cut, public spending on key social services such as health and education were not. The government on the other hand, has to introduce a targeting mechanism to replace food subsidies by applying a coupon system or any other adequate mechanism available to support low-income groups.
- (ii) Establishing the development and employment fund to provide needy families with the necessary fund to set up small productive projects.
- (iii) Expanding training opportunities for the unemployed and low-income groups to help them acquire the skills needed for the jobs created by economic growth.

5.6 Structural Adjustment Program 1992-1998 (SAPII)

The World Bank and the IMF staff emphasized that Jordanian economic circumstances after the first Gulf war and its aftermath determine a continuing and comprehensive program. Therefore, Jordan found itself obliged to apply structural adjustment program aimed at sustaining high economic growth, maintaining low inflation and securing a strong balance of payments position. To these ends, policy measures have been taken to reduce the fiscal deficit, contain domestic liquidity expansion, improve financial intermediation and to liberalize the trade exchange

systems. The IMF and the World Bank imposed the program policies to cover the period 1992-1998.

5.6.1 The Program Objectives

There is no important difference between the aims of the SAP_I and the SAP_{II} as shown in the Tables (5.3) and (5.4). Indeed, the only difference is that the second program was extended a longer period to cover 7 years. In addition, the program took into consideration the country's circumstances after the first Gulf war and its aftermath, particularly in the terms of:

- (i) Financial support: it was reported in the last four months of 1990 that Jordan's financial loss stood at US\$ 1.3 billion, including exports losses, remittances and losses from tourism and transit [Milton-Edwards and Hinchcliffe, 2001: 76-79].
- (ii) The return of more than 300,000 Jordanian workers including their families, thus increasing the population by 10 per cent and the level of unemployment to 30 per cent.
- (iii) Poverty rate: a UNICEF survey in 1991 claimed that over 30 per cent the population was living below the official poverty line (family income of less than US\$ 130 a month) compared to 20 per cent before the Gulf war, [Milton-Edwards and Hinchcliffe, 2001: 76-79].

It is worth noting that the program is based on many hypotheses that are essential for the achievement of the program aims. These hypotheses are shown as follows, [Jaradat, 1994: 61-62]:

- (i) Achieving a gradual increase in domestic savings.
- (ii) Increasing investment and investment efficiency.
- (iii) Supporting the private sector's role in the economy.
- (iv) Continuing measures to liberalize the economy with regard to interest and exchange rates.
- (v) Continuing the institutional and structural reform in government departments.
- (vi) Re-opening the traditional markets for Jordanian exports and employment in the Gulf countries.

5.6.2 The Program Policies

The implemented policies in this program extended those in the first program 1989-1993. The main policies carried out by this program can be summarized as follows [Maciejewski and Mansur, 1996]:

(A) *Fiscal Policy*: as mentioned earlier, fiscal adjustment was the essential element of macroeconomic adjustment. Therefore, the authorities targeted a significant reduction in fiscal deficits through both revenue enhancements and the containment of current expenditures, including increases in the domestic prices of some of the main goods and services, such as petroleum products, electricity and water supply.

Also, the authorities were asked to continue their efforts to broaden the tax base. In this regard, the government was asked to impose a General Sales Tax instead of a consumption tax.⁵ On the expenditures side, a central element was reducing public expenditures and focusing more on the reduction of current expenditures, including military spending and food subsidies, in addition to freezing wages. In general, the aim was to reduce the budget deficits from 4.0 per cent of GDP in 1992 to 2.5 per cent of GDP in 1998, Table (5.4).

(B) *Monetary Policy*: the monetary policy plays a vital role in structural adjustment programs by ensuring monetary stability and thus stimulating domestic economic activity. Therefore, it is an intermediate targets which affects real variables such as economic growth and investment. In practice the government followed a steadily tightening monetary policy, aimed at establishing a strong base for non-inflationary growth by controlling the credit expansion consistent with the external and inflation objectives and with achieving interest rates that were positive in real terms. The authorities started to use indirect monetary control mechanisms. For instance, in 1993, the CBJ started to issue Certificates of Deposit (CDs) denominated in JD, as a new indirect instrument of monetary control. As for exchange rates, monetary policy aimed at maintaining flexible and competitive exchange rates to maintain external competitiveness. Moreover, this policy called for the building up of gross official reserves.

(C) *Balance of Payment Policy*: this policy was aimed at eliminating current account deficits to reach a balanced state by the end of the program, mainly by increasing the export of goods and services and controlling imports. This is to be done by expanding the production base directed toward exports, opening new export outlets, expanding traditional markets and improving export incentives and the quality of products needed to meet the requirements of export markets. Along with these measures the program recommended equality between locally produced and similar imported products with regard to consumption tax and amending the customs tariff structure.

(D) *Productive Sectors*: as this policy aimed to improve the supply side of the economy, it emphasized on the privatization program and the need to increase investment efficiency driven by the forces of market competition, encouragement of private sector investment and implementing reform measurement in the productive sectors. For instance, under the ongoing reform of the energy sector operations supported by the World Bank Energy Sector Adjustment Loan (ESAL), the authorities are seeking to achieve certain financial targets in the operations of the Jordanian Electricity Authority (JEA) and to formulate financial and institutional restructuring plans for the power sector.

(E) *External Debt Management Policies*: according to the program, the government has to remove all its obligations during the program period by paying or rescheduling principal and interest and limiting short and medium term hard loans. The measures taken to manage the external debt were not limited to debt restructuring, which

provides only temporary relief. The government also adopted a more comprehensive approach to debt management, in addition to debt restructuring; it sought to reduce the level of its debt stock through market based operations such as swaps and debt buybacks.

It is worth noting that the Jordanian government, which committed itself to the implementation of an economic adjustment program, introduced the Economic and Social Development Plan 1993-1997 to make the adjustment program an integral part of overall social and economic planning. Indeed, this plan has distinguished itself from the previous development plans in a number of important respects [World Bank, 1994: 1-2] as follows:

- (i) It has strongly emphasized the importance of creating a stable fiscal and monetary environment as necessary conditions for achieving sustainable growth.
- (ii) It has embodied specific policy measures to encourage the private sector to play a greater role in the economy.
- (iii) It has complemented the on-going structural adjustment program by giving particular attention to the closely related social and development issues. In this regard the government established a wide network of welfare programs ranging from generalized subsidies to targeted means. Accordingly, the

authorities funded the operations of the National Aid Fund (NAF), which provides direct income support to the extremely poor. Also, the government expanded training opportunities for the unemployed and for low-income groups through the Development and Employment Fund (DEF).

- (iv) Finally, the plan has adopted a flexible policy framework and planning process in order to effectively respond to changes in the external environment.

5.7 Structural Adjustment Program 1999-2001 (SAPIII)

The government fell back to the IMF and World Bank, as Jordan's economy was almost stagnant during the last three years of the previous program SAPII, where real GDP growth slowed to an annual average 1 per cent in 1996-1998. Moreover, the fiscal deficit had widened to about 10 per cent of GDP by 1998, instead of being reduced to 2.5 as envisaged in the program. On the other hand, domestic and regional political uncertainties, coupled with the large fiscal deficit and shortfall in exports of goods and services, put pressure on foreign exchange reserves in 1998.⁶ Under these circumstances, Jordan was obliged to turn to the IMF and World Bank once again, thus in April 1999 the IMF approved approximately US\$ 220 million of new credit for Jordan under a three-year economic adjustment program covering 1999-2001. The agreement provides Jordan with US\$ 174 million under the (EFF) [IMF, 1999].

This Extended Fund Facility (supported-program) is designed mainly to promote a gradual recovery in the growth rate of GDP to 3-4 per cent per yearly, maintain Jordan's low inflation rate and to insure a substantial strengthening in official foreign exchange reserves. The summary of the SAP^{III} objectives appears in Table (5.5).

As for the structural reform agenda, the program emphasizes the areas of taxes; in this regard the government was asked to adopt a value added tax (VAT). In the financial sector, the program recommended the government to adopt a new banking law that will enhance bank regulation and supervision. In the trade area, the maximum tariff rate will be lowered in two steps from 40 per cent currently to 30 per cent by early 2000 [EIU, 2001a: 23]. The public enterprise reform and privatization program will pick up speed, where significant steps are being taken to privatize the other institutions such as the Royal Jordanian Airline and the National Electric Power Company.

Finally, the government will continue the efforts started in the previous program to protect the more vulnerable social groups and promote employment generation, in particular through the Social Productivity Program.⁷ These medium-term macroeconomic objectives will be pursued through fiscal consolidation, a continued prudent monetary policy consistent with the stability of the JD and wide-ranging structural reforms.

5.8 General Assessment of Jordan's SAPs

After reluctance and economic crisis, Jordan finally committed itself to a comprehensive typical structural reform package for more than 14 years. The program included monetary and fiscal restraints, devaluation and market reforms. These macroeconomic policies and structural reforms were necessary to overcome the external and the internal imbalances.

It is clear that the structural adjustment programs in Jordan are a part of the IMF and World Bank typical package for the developing countries, which essentially include what is called demand-side policies and supply-side policies. These are aimed at overcoming the imbalances and maintaining macroeconomic soundness to improve economic performance and efficiency for sustainable economic growth.

With regard to the Jordanian SAPs objectives, although there were three programs during 1989-2001, their objectives, however, are identical, as the BWIs consider these programs a core aspect of macroeconomic soundness. These objectives as they appear in the tables are:

- (i) Achieving sustainable growth.
- (ii) Reducing inflation.
- (iii) Stabilizing the exchange rate.
- (iv) Tackling the current account deficit.
- (v) Enhancing the country official reserves.

On the policies side, the previous tables suggest that devaluation was not included in the SAPs package. Obviously, devaluation in the Jordanian case has been a precondition as Jordan had already devalued its currency before requesting the BWIs help in early 1989. With regard to the balance of payment policy, both programs SAP_I and SAP_{II} deem workers' remittances and tourism income as key elements in the financing of balance of payment deficits. In fact the SAP_{II} expected that the remittances and the income from tourism would constitute 21.5 per cent of GDP in 1998.

Moreover, the program also clearly calls the authority to look for financial aid to finance the country's needs. In the light of the above, one can argue that these recommendations are not appropriate policies for Jordan. This is because these sources of fund contain a high degree of uncertainty. Jordan's future revenues in this form will depend heavily on uncertain political and economic circumstances in neighboring country and the rest of the world. Therefore, the dependency on external fund go against the IMF and the World Bank aims at achieving self reliance and unremitting growth in the country's official reserves and thus leaving Jordan's economy extremely vulnerable to external shocks.

As for the budget deficit, the program approach to reduce the budget deficit partly focuses on the tax side more than the expenditure side, through a broadening of the tax base and imposing Sales Taxes, later on the government was asked to adopt (VAT). The SAPs call for reducing tariffs on imports in order to liberate foreign

trade will have an adverse effect on the Jordanian economy. This is because, these measures will lead to adverse effects on new national industries which the government encouraged according the World Bank's recommendations. On the other hand, considering that the tariffs are an essential source of government revenues in Jordan, the reduction of tariffs and removal of imports tax in the short run would reduce government revenues, making fiscal balance harder to achieve, and potentially leading to an expansion of the government's deficit. According to financial report, the contribution of customs duties to the state budget fell by about 50 per cent, from an average of 22.3 per cent during 1992-1995 to 14.4 per cent in 2001 [Kardoosh, 2003].

There is some doubt that Jordan's economy will be able to sustain economic growth, without the financial help from the BWIs. In fact Jordan has adopted three SAPs during the period 1989-2001. Recently the government signed a new agreement with the IMF and the World Bank for the period 2002-2004. The main goals for this program (as for the previous one) are to raise further economic growth and to continue implementation of sound macroeconomic policies and structural reforms. As the government official announced that this program is the last SAP Jordan needs to adopt under the supervision of the BWIs. By the end of this program 2002-2004 the country will end almost 14 years of structural adjustment and market reforms.

This might lead us to question of the ability of Jordan's economy in sustaining stable macroeconomic environment without the help from the BWIs and other donors. At

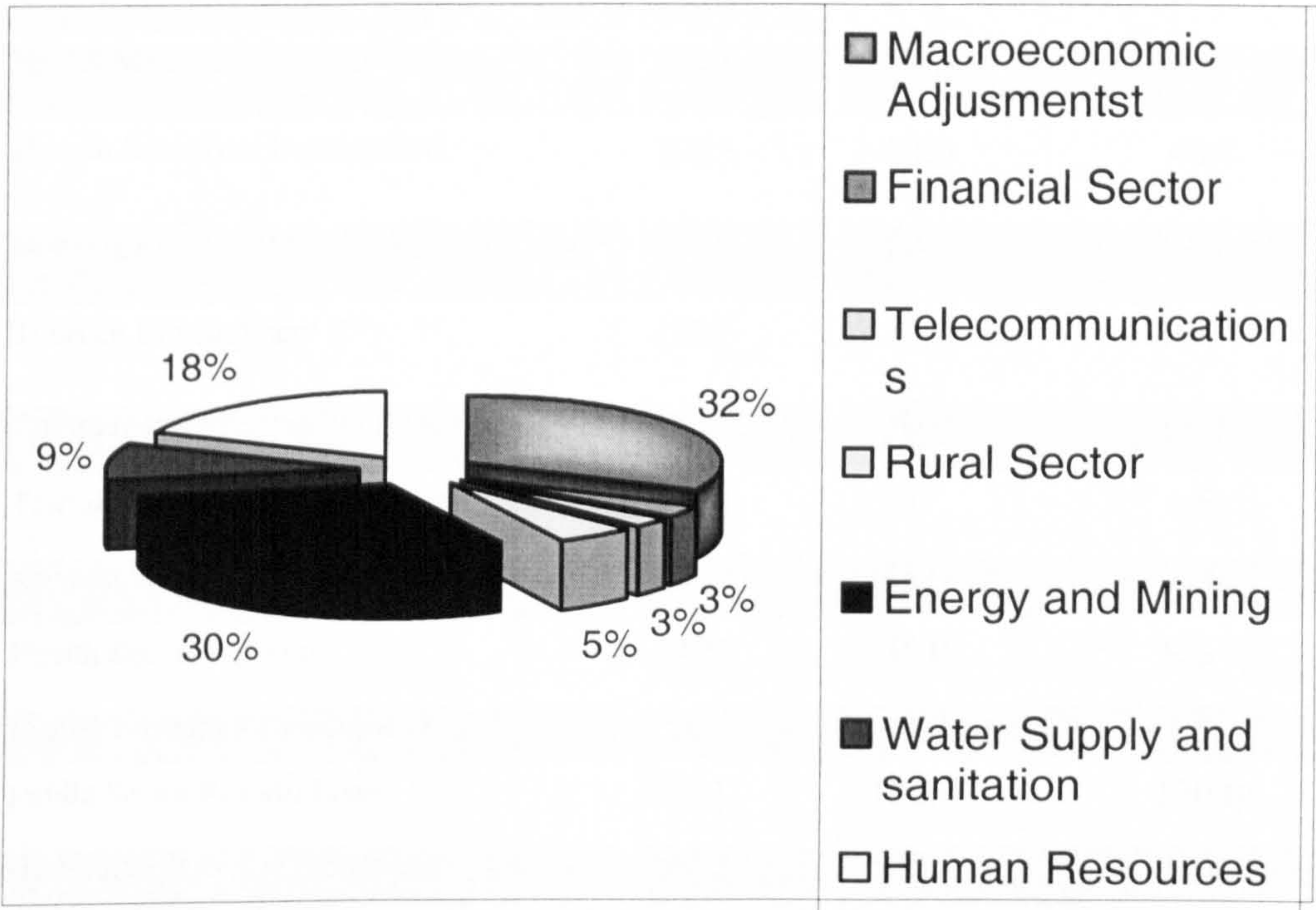
the moment we are not able to answer this question as the country still under the SAPs. However, there are some indicators in the literature that support our argument. According to Pugel and Lindert (2000: 499) many countries appear to be chronically dependent on the IMF and World Bank loans even after the SAPs. Indeed, sixty countries have borrowed in almost every year since their first borrowing from the IMF. In general, Jordan needs the IMF and the World Bank help to gain the following support:

- (i) The program supported by the BWIs offers financial fund “Hard Currency” to support adjustment and reform policies. Without this help it might be extremely difficult for the country to correct the maladjustment in balance of payments and fiscal deficits. In fact most developing countries seek the collaboration of the IMF and the World Bank since they offer the adjusting countries loans to support their stabilization process. Moreover, the BWIs collaboration open the door for new private and official lending to the country. The IMF plays a unique role, in this respect; it is the only institution with the responsibility to approve a country adjustment program. The important thing is that when the IMF approves an adjustment program it provides a Seal of Approval or (seal of good house keeping) for borrowing countries. This means, for the outside world, a country is taking the appropriate steps to improve its economy. According to Wood (1997), this important approval function is equally an important signal for the go-ahead of donors and lenders to provide resources in support of adjustment programs

and it reassures lenders, including private capital. Thus, without the IMF seal of approval, Jordan cannot expect to receive a significant amount of balance of payments support from other donors.

- (ii) The IMF and the World Bank provide the adjusting countries with a wide range of technical assistance and training to help the government design and establish the reform program.
- (iii) The World Bank and the IMF agreement with Jordan under the SAP have been helping the government to get support from international donors by getting soft loans or debt forgiveness.
- (iv) In many cases the governments of developing countries prefer to resort to the IMF and World Bank to adopt SAPs, mainly because they can easily blame the IMF and the World Bank for politically difficult policy changes, while they privately know that economic reform are inevitable with or without the BWIs. However, if the government of the developing country adopts a national program they have to face the public, which might put the government's popularity at risk.

Figure (5.1)
World Bank Lending in Jordan



Source: The World Bank Group (2002 and 2001) Quarterly Publication of the Jordan Country Unit, (Different Reports).

Table (5.1)
The World Bank Supported Project in Jordan (1993-2002)

Project Name	Approval Year	Loan Amount	Amount Disbursed
		US\$ Million	
Health Management	1993	20.0	17.8
Human Resources Development	1995	60.0	48.7
Housing Finance & Urban Sector Reform	1996	20.0	19.1
Tourism Development II	1997	32.0	10.2
Community Infrastructure Development	1997	30.0	12.9
Training & Employment Support	1998	5.0	1.5
Amman Water & Sanitation Management	1999	55.0	16.6
Health Sector Reform	1999	35.0	9.3
Higher Education Development	2000	34.7	1.5
Public Sector Reform Loan	2001	120.0	120.0
Horticultural Export Promotion	2002	5.0	5.0
Second Public Sector Reform Loan	2002	120.0	0.0
Total		536.7	262.6

Source: The World Bank Group (2002 and 2001) Quarterly Publication of the Jordan Country Unit, (Different Reports).

Table (5.2)
Jordan Financial Position in the IMF (2003)

General Resources Account	SDR Million	% Quota
Quota	170.50	100.00
Fund holding of Currency	508.86	298.45
Reserve Position in Fund	0.05	0.03
Holding Exchange Rate	....	....
SDR Department	SDR million	% Allocation
Net Cumulative Allocation	16.89	100.00
Holdings	1.20	7.12
Outstanding Purchases and Loans	SDR Million	% Quota
Stand-By Arrangements	10.66	6.25
Extended Arrangements	306.43	179.73
Contingency and Compensatory	21.31	12.50
Latest Financial Arrangements	SDR Million	SDR "Drawn"
Stand-By 2002-2004	85.28	10.66
EFF 1999-2002	127.88	127.88
EFF 1996-1999	238.04	202.52

Source: IMF (2003) "Jordan: Financial Position in the Fund" Retrieved 5th may, 2004, from World Wide Web < www.imf.org/external/np/tre.../exfin2.cfm/memberkey1.

Table (5.3)
Structural Adjustment Program Targets 1989-1993, (SAP I)

	1988	1989	1990	1991	1992	1993
Real GDP Growth	3.5	0.0	3.4	3.8	4.0	4.0
Inflation Rate	4.6	14.0	12.1	10.2	8.7	7.3
Domestic Credit (growth rate)	7.4	7.8	7.8	7.9	8.0	8.7
Money Supply M2 (growth rate)	12.1	13.0	13.0	13.0	13.0	11.0
As Percent of GDP						
Consumption	103.2	103.0	97.0	94.0	92.0	91.0
Investment	26.1	26.0	26.0	26.0	26.0	27.0
Domestic Revenue	31.8	29.0	31.0	33.0	34.0	34.0
Foreign Grants	7.3	10.0	8.0	6.0	5.0	4.0
Total Expenditures	53.7	49.0	48.0	47.0	46.0	44.0
Budget Deficit	22.0	20.0	17.0	14.0	12.0	10.0
Trade Deficit	37.4	43.0	36.0	32.0	29.0	28.0
Exports	22.4	30.0	31.0	30.0	30.0	30.0
Imports	59.8	73.0	67.0	62.0	59.0	58.0
Currant Account	6.1	5.0	3.0	2.0	1.0	0.0
Workers' Remittances (Net)	16.4	21.0	19.0	18.0	18.0	17.0
Tourism Income (Net)	3.1	8.0	7.0	7.0	7.0	6.0

Source: Jordanian Government (1989) "Structural Adjustment Program" Amman: Jordan

Table (5.4)
Structural Adjustment Program Targets 1992-1998, (SAP_{II})

	1992	1993	1994	1995	1996	1997	1998
GDP Growth	11.3	6.0	5.5	5.8	6.0	6.2	6.5
Inflation	5.3	5.0	4.5	4.5	4.5	4.5	4.5
Money Supply M2 (growth rates)	7.4	8.6	10.2	10.6	10.7	11.0	11.3
Reserves, in US\$ million	446.2	504.9	567.0	630.3	692.1	711.4	732.8
Reserves, in month of imports	2.2	2.4	2.6	2.8	3.0	3.0	3.0
<i>As Percent of GDP</i>							
Consumption	105.0	99.9	97.8	95.6	93.3	91.6	88.9
Investment	25.7	23.2	22.3	22.5	22.8	23.0	23.5
Domestic Revenue	35.3	32.2	31.7	31.8	31.2	31.0	31.0
Total Expenditures	39.3	38.6	36.6	36.2	34.2	33.8	33.5
Foreign Grants	7.0	5.4	4.9	4.1	3.1	2.5	2.0
Budget Deficit (Excluding Grants)	4.0	6.4	5.3	4.4	3.4	2.8	2.5
Trade Deficit	44.2	36.5	33.8	31.3	29.3	27.7	26.2
Exports	25.5	26.2	26.9	28.0	28.4	28.8	29.1
Imports	69.7	62.2	60.7	59.3	57.7	56.5	55.4
Current Account Deficit	15.5	10.4	7.2	6.0	3.9	3.4	2.7

Source: CBJ (1992-1998) "Annual Report"

Table (5.5)
Adjustment program Targets 1999-2001, (SAP_{III})

	1999	2000	2001
GDP Growth	2.0	2.5	3.5
Inflation Rate	1.9	2.8	2.4
Money Supply M2 (Growth Rate)	8.2	8.7	8.4
<i>As percent of GDP</i>			
Fiscal Deficit (Excluding Grants)	7.9	5.5	4
Trade Deficit	25.1	25.0	24.1
Current Account Deficit	0.7	1.7	1.8
Total Revenues	28.9	27.1	...

Source: CBJ (2001) “Annual Report”

Endnotes

- ¹ In fact this program has been reviewed in the end of 1995 and the result of this revision was what is called the expended program for the period (1996-1998).
- ² See, Snowden (2004).
- ³ A number of other short-term IMF arrangements have been introduced to supplement SBA and EFF. These arrangements include the supplemented Reserve Facility (SRF), the Country Stabilization Fund (CSF), the Compensatory and Contingent Financing Facility (CCFF), and the Systematic Transformation Facility (STF). For more dateless see the IMF website, (www.imf.org).
- ⁴ SDR is an international reserve to asset introduced by the IMF in 1969. The SDR =US\$ 1.363.
- ⁵ The Jordanian parliament agreed to apply the Sales Tax in 1994 after long discussion with the government.
- ⁶ The Palestinian Intefada (uprising) in the West Bank in the late of 1990s, in addition to the Iraq crises are badly affected the economic reform process.
- ⁷ It is an ambitious comprehensive program, which is launched by the government in 1997 aims at alleviating poverty in Jordan. This program will be implemented over a ten-year period. See the Jordanian ministry of planing website (www.mop.gov.jo).

CHAPTER SIX

THE MACROECONOMIC EFFECTS OF JORDAN'S SAPs:

A COMPARISON APPROACH

6.1 Introduction

This chapter seeks to assess the impact of SAPs on the Jordanian economy, taking the main macroeconomic variables as program performance indicators. In recognition of the methodological shortcomings in the alternative techniques that are used to estimate the program effects, as explained in Chapter Four, this study will apply different methodologies in an attempt to gauge the program's effectiveness. In particular, this study will address the issue by answering the following questions: To what extent do the programs achieve their own targets? Did the SAPs result in an improvement on the initial situation in Jordan? What are the effects of SAPs instruments on the main macroeconomic indicators in Jordan? To answer the above questions, the study will apply the following approaches to the above questions, respectively, the target-actual approach, the before-after approach and econometric modeling.

Accordingly, this chapter will utilize the actual-target approach and the before-after approach. Econometric modeling, however, will be our theme in the next chapter. The rest of this chapter is divided into two sections. The first section will begin with the actual-target approach. In the second section, we will give an assessment of the macroeconomic effects of the SAPs using the before-after approach, which provides

useful information about the economic situation before and after the program. Finally, the main conclusions will be given at the end of the chapter.

6.2 The Program Outcomes: Target -Actual Approach

This section attempts to evaluate the macroeconomic performance under the SAPs, using an actual-target approach. In particular, this section looks at economic growth rates, current account deficits, budget deficits, inflation rates and trade deficits. Basically, this approach compares what a program actually achieves with what it was planned to achieve. A major weakness of this methodology (as explained in Chapter Four) is that the target values contain forecasting errors. However, an attempt can be made to overcome these weaknesses, as has been argued by Chalira (1993: 192). In this regard, the quality of the target values has to be evaluated and such evaluations may yield useful insights into ways of improving the methodology by which the targets are set.

Notwithstanding these criticisms of the actual-plan approach, one should state that this methodology is still useful in knowing to what extent the programs achieved their own targets. In relation to the program's targets we assume that they are based on a scientific framework applied by the IMF and the World Bank. In some cases the program considers the individual country circumstances in setting its targets as the case was in Jordan. Moreover, using this approach enables us to explain why the program was under-performance or over-performance. Similarly, this approach sheds light on how the country's macroeconomic performance was affected by the SAP.

Consequently, this section will utilize the target-actual methodology to evaluate the effectiveness of Jordan's SAPs at the macro level during the program period. The analysis will be supplemented by a comparison of program target-actual outcomes during the program period against pre-SAP economic performance, partly with the view to assessing how realistic the program targets were in relation to their outcomes and to the corresponding pre-SAPs average performances.

Table (6.1) is a companion of two programs (1992-1998) and (1999-2001). It provides an overview of Jordan's macroeconomic performance during the whole program period 1992-2001. Unfortunately, one problem which we faced with regard to our attempt to interpret the macroeconomic performance during the programs period is that the published data does not provide target figures for all the macroeconomic indicators in the (1999-2001) program, as shown in Table (5.5). As the aim is to undertake a detailed target-actual comparative analysis of SAPs and during the whole program period (1992-2001), Table (6.1) therefore, includes only the macroeconomic targets which are available in both programs (1992-1998) and (1999-2001). On the other hand, Table (6.1) also includes actual outcomes and targets of SAPs for the period (1992-2001) supplemented with the average of both the actual performance pre-and post-SAPs and the program targets (Columns A, B). In this respect, it is worth pointing out that Appendix (ii) offers the actual macroeconomic performance compared with the program targets for the period (1992-2001) using Column Graphs.

Table (6.1)
Target-Actual of Jordan's SAPs (1992-2001)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Average Pre-SAP 79-88 (A)	Average Post-SAP 92-01 (B)
Real Growth Rate												
Target	11.3	6.3	5.5	5.8	6.0	6.2	6.5	2.0	2.5	3.5	...	5.6
Actual	17.0	5.8	7.8	3.9	1.0	1.3	1.7	3.1	3.9	4.2	(4.2)	5.0
Inflation Rate												
Target	5.3	5.0	4.5	4.5	4.5	4.5	4.5	1.9	2.8	2.4	...	4.0
Actual	4.0	3.3	3.6	2.4	6.5	3.0	3.1	0.6	0.7	1.8	(5.9)	2.9
Budget Defect (GDP %)												
Target	4.0	6.4	5.3	4.4	3.4	2.8	2.5	7.9	5.5	4.0	...	4.7
Actual	9.1	6.1	6.1	5.2	7.4	10.4	10.0	7.3	7.4	7.0	(21.8)	7.6
Trade Balance Defect (GDP %)												
Target	44.2	36.6	33.8	31.3	29.3	27.7	26.2	25.1	25.0	24.1	...	30.3
Actual	40.0	41.7	32.6	29.2	37.3	31.3	25.6	23.2	31.9	28.9	(40.8)	32.2
Current Account (GDD %)												
Target	-15.5	-10.4	-7.2	-6.0	-3.9	-3.4	-2.7	-0.7	-1.7	-1.8	...	-5.3
Actual	-16.3	-11.4	-6.6	-3.8	-3.2	0.4	0.3	5.0	0.7	0.6	(-2.7)	-3.4
Money Supply (Growth Rate)												
Target	7.4	8.6	10.2	10.6	10.7	11.0	11.3	8.2	8.7	8.4	...	9.5
Actual	13.6	6.7	8.0	6.6	0.3	7.8	7.8	11.4	10.2	5.8	(16.2)	7.8
											"Researcher Calculations"	

Sources: CBJ, (1992-2001) "Annual Report"

A quick glance at Table (6.1) and from comparing the average targets (1992-2001) for the macroeconomic indicators with the average actual performance for the same period (Column B), one can observe that the program has significantly achieved its targets, with respect to inflation rate, the current account balance and the money supply. However, by and large, the figures were unsatisfactory for the budget deficit, the economic growth and the trade balance.

Notwithstanding, what we have pointed out above, if we dwell on the table we observe slightly different behavior regards to the program's targets during the structural adjustment period. Indeed, Table (6.1) indicates that the program targets for economic growth and the budget deficit during the (1999-2001) program were modest compared to their identical targets in the previous program (1992-1998). However, the targets for trade balance, the current account and the money supply seemingly follow the same trends for both programs (1992-1998) and (1999-2001). With respect to the inflation rate, Table (6.1) shows that the targets figure for the (1999-2001) program were more optimistic compared to their identical ones in the (1992-1998) program.

It may be argued, that the economic growth and the budget deficit targets for the period (1992-1998) were unrealistically optimistic compared with their targets for the period (1999-2000), particularly if we compare the targets with the actual outcomes for these variables during the (1992-1998) program. Consequently, the targets for both the budget deficit and the economic growth were adjusted, taking

into account the modest achievements registered during the initial years (1992-1998). In relation to the trade balance and the money supply, the (1999-2001) program targets kept follows the same initial trends in (1992-1998) program. This is because the targets, which had been set for these variables, were generally achieved during the (1992-1998) program.

Finally, by examining the inflation rate actual performance compared with the program targets we can see that the SAP not only achieved its targets but also, in most cases, the actual inflation rates were less than those the program was planed to achieve. On the other hand, looking at the inflation targets for the (1999-2001) program, we can see how they were optimistic compared with the inflation targets for the initial program (1992-1998). Consequently, from what has been explained above, regarding the inflation rate, one can realize the deflationary nature of SAPs.

Generally speaking, in comparing the actual-target indicators, Jordan's economic performance is over-performance in relation to the inflation rate, the current account and the money supply growth rate. However, targets set for economic growth and the trade balance were generally under-performance, see Table (6.1) Column, B.

As for the budget deficit performance, although the table provides support for the interpretation that the SAPs were successful in improving the government budget balance to a significant degree compared with its historical average of 21.8 per cent per annum for the period (1979-1988), however, Table (6.1) concludes that the

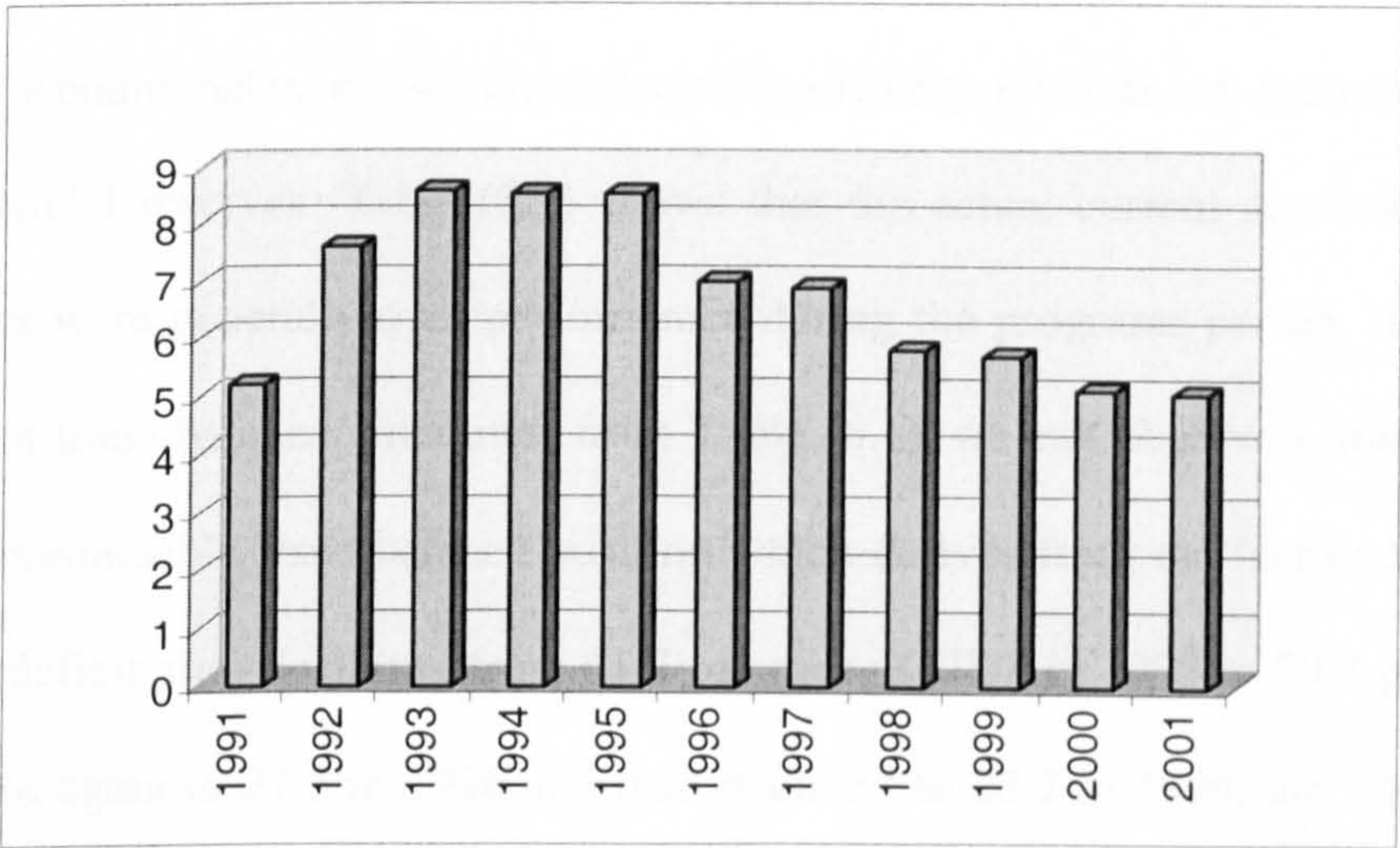
program has failed in terms of meeting its targets. As the target figures for the expenditure and the revenue side of the budget deficit were not available for the whole program period, it was difficult to investigate the main reasons behind the budget deficit outcomes. However, more investigation into this issue will be illustrated in the before-after approach.

With regard to the economic growth performance, Table (6.1) shows that notwithstanding, the remarkable achievements, which were registered during the initial years (1992-1995) and in the last years of the (1999-2001) program, the overall performance of economic growth was dismal during the program period (1992-2001). Table (6.1) shows that the actual real GDP growth rate was 5.0 per cent per annum during the adjustment period as contrasted with the average economic growth targets of 5.6 per cent and with 4.2 per cent the average growth pre-SAP.

Although the above comparisons show that the SAP almost met its targets with regard to the economic growth, in fact, the chief reason for the high rates of growth, 17 per cent, 5.8 per cent, 7.8 per cent and 3.9 per cent in 1992 to 1995, respectively, was due to the mini boom which resulted from the return of 300.000 Jordanians previously living and working in Kuwait.¹ The majority was able to liquidate its assets and repatriate them to Jordan where they were channeled into property construction and new businesses.

Figure (6.1) provides evidence to the argument above. According to the Economist Intelligence Unit (1997: 16) the reasons for the continuation of strong economic growth were threefold: the boost to the services economy from the arrival the returnees, the increasingly strong performance of manufacturing industry and finally, the peace treaty with Israel which gave an immediate boost to business confidence. Not surprisingly, by 1996 the returnee-led boom had largely run its course and hopes of sustaining growth had dissipated.

Figure (6.1)
Construction Sector Relative Importance of GDP (1991-2001)



Source: CBJ (1991-2001) “Annual Report”

In relation to the monetary policy, which plays an important role in determining the adjustment programs, Table (6.1) provides evidence of adequate adherence of the authorities in controlling money growth to a level lower than the program targets. Looking at the money supply growth rate, an average of 7.8 per cent per annum was significantly lower than the corresponding 16.2 per annum during the pre-SAP

period. On the other hand, it is clear from the table that monetary policy during the program period played a vital role, as much of the impetus for economic growth has been non-inflationary. This is because monetary policy has remained tight without precipitating a renewed bout of long deep recession. It would perhaps, consequently, appear that fully adhering to the implementation of tight monetary policy during the program period contributed towards achieving the program targets.

Bearing in mind that the SAP aims at achieving internal as well as external stabilization, Table (6.1) provides support for the interpretation that the SAPs were relatively successful in improving the external sectors (the trade balance and the current account balance), which reflected positively towards an accumulation of gross official reserves. Table (6.1) shows that the actual current account balances outcomes were generally over-performance during the programs period. In relation the actual trade balance outcomes, from Table (6.1), we can observe some evidence of an unsustainable trade balance position which derives from the fact that the trade balance deficit after declining from 41.7 per cent of GDP in 1993 to 29.2 per cent in 1995 rose again to 37.3 in 1996 and then declined to 23.2 in 1999, etc. In general, the average trade balance deficit of 40.8 per cent of GDP before SAPs declined to an average of 32.5 per cent of GDP after SAPs.

To sum up, the important inferences which we are able to draw from Table (6.1) are as follows:

- (i) The government budget is one of the main obstacles and one where the adjustment program registered failure in terms of keeping the deficit under control. Bearing in mind that SAPs rely on controlling the budget deficit as a crucial target towards achieving external and internal stabilization, reducing the budget deficit remains a significant target, which has not been fully achieved during most of the 10 years of the SAPs.
- (ii) In relation to the economic growth, although real economic growth has slightly improved in the recent years of the SAP period, these outcomes need to be sustained in the coming years, particularly as the registered economic growth performance in the initial years of the SAP was due to non-program factors. Consequently, it is hard to believe that SAPs have significantly improved the economic growth in Jordan.
- (iii) From the program design point of view, an examination of the table reveals that some of the projected figures were unrealistic, at least compared with the outcomes during the adjustment period, particularly for the budget deficit and economic growth. In relation to the budget deficit, if we examine the average budget deficit before the SAP, Table (6.1) reveals that with a budget deficit average of 21.8 per cent of GDP per annum, it is quite difficult to reach 4.5 per cent by the end of the SAPs period, unless the target figures are unrealistically optimistic, particularly in a country where government services remain one of

the largest single contributors to GDP; accounting for 17.2 per cent of GDP in 2001, Table (2.2).

6.3 The Program Outcomes: Before-After Approach

The purpose of this section is to assess the effectiveness of the stabilization and adjustment components of the SAPs using the before-after approach. Basically, this approach compares the macroeconomic performance before with the performance after the program was initiated. One argument against this approach, as has been explained by Ul-Haque and Khan (1998) is that this approach has its limitations as a counterfactual estimator, which means that it assumes no changes would have occurred in the absence of the program.

However, this criticism is not relevant in our case because the intention is to simply, identify and assess the impact of policy changes such as those imposed by the IMF and the World Bank. Therefore, this criticism is not relevant to our study, as it does not claim that the objective is to measure the efficiency of this approach as an estimator of the ideal counterfactual method.

Thus, in this section, the evaluation of the adjustment program effects in Jordan are based on the comparison of the observed behavior of certain selected economic variables before and after the program. The comparison will also be made by testing for statistically significant differences between the pre-program and post-program periods in the main selected macroeconomic variables. The statistical test was done

on a yearly basis, ten years before and ten years after, in order to determine any observed differences in the values of the variables before and after the introduction of the program. To do so, a non-parametric test, the Mann-Whitney (u-test) was chosen.

This test, also known as the (Wilcoxon Rank Sum test), depends only on the assumption of the independence of the respective observations and that these observations are subject to ordinal measurement and can be ranked. This test is one of the most powerful of the non-parametric tests for comparing two samples. It is used to test the null hypothesis that two samples have identical distribution functions against the alternative hypothesis that the two distribution functions differ only with respect to the median. The Mann-Whitney test does not require the assumption that differences between the two samples are normally distributed.

In many applications, the u-test is used in place of the two-sample t-test, when the normality assumption is questionable. This test can also be applied when the observations in a sample of data are in ranks, that is, ordinal data. Further, since the Mann-Whitney procedure is essentially a test of the medians of the two periods, the significance levels obtained are not biased by the presence of outliers (as in using mean), see Weinberg and Goldberg (1990) and Connors (1979). For these reasons, this study used such non-parametric procedures.

Indeed, earlier work by Reichmann and Stillson (1978), Pastor (1987) and Killick (1984) looked at the effects of the IMF programs using non-parametric tests. In these studies the significance of the change in pre and post SAPs observations is determined by using several of the non-parametric tests like the U-test. For our study purpose, the Mann-Whitney (u-test) will be applied for the ultimate SAPs targets.

In all cases, the null hypothesis is that there is no change in the variable during the course of the SAPs program (e.g. that post = pre). A low significance level indicates rejection of this null hypothesis in favor of the specified alternative. The results are briefly summarized in Table (6.6). In the following sections the before-after approach will be used to evaluate the macroeconomic effects of Jordan's SAPs.

6.3.1 The Economic Growth Performance

In Jordan, achieving sustainable economic growth was emphasized in all the IMF and World Bank-supported programs, as is clear from the program targets, Tables (5.3, 5.4 and 5.5). However, it might be useful to state that some of the sharpest critiques of SAPs are related to the effect of these programs on economic growth. The general criticism is that SAPs are in some senses inimical to economic growth.

According to Przeworski and Vreeland (2000), the IMF staff response to this criticism can be split into two specific criticisms. The first is that IMF policy recommendations relating to the restraint of aggregate domestic demand and to

altering exchange rate are said to exert an adverse effect on economic growth. The IMF response to these criticisms is that as long as the initial problem in the countries requesting the fund is excess aggregate domestic demand (absorption), then absorption must be reduced in order to achieve the program objectives.

The second issue is how the reduction in absorption will influence the output level or real income. In addressing these issues, IMF staff distinguishes between the short-run effects and the long-run effects of the IMF programs on growth. In practice, they admit that a decline in the growth rate is a necessary part of adjustment to eliminate underlying imbalances in the economy. However, the critical question, of course, concerns the size and the duration of the short-run effects of policies designed to reduce absorption.

Even if it was determined that stabilization programs reduce output in the short-run, a longer-term aspect of the relationship between the programs and growth needs to be considered. Indeed according to the IMF staff, it is a basic premise of IMF programs that balance of payments recovery does not conflict with economic growth when the time-horizon of both objectives is specified to be the medium term. The IMF staff explains that this view is based on a number of considerations [Khan and Knight, 1985: 4-8], which can be summarized as follows:

- (i) The supply side or the structural policies in adjustment programs are intended to enhance the productive potential of the economy by improving the allocation of resources and stimulating domestic savings and investment.
- (ii) The structural policies allow for a higher rate level of sustainable capital inflows and thus a higher rate of economic growth in the long run.
- (iii) As the SAPs include financial reform and stability measures, thus a successful stabilization program can have a beneficial effect on the state of confidence in the economy leading to gains in employment, productivity and output.

Yet whether or not the SAPs have positive effects on economic growth is an empirical question. However, here again, the results are ambivalent, while Reichmann and Stillson (1978), Connors (1979), Pastor (1987) and Gylfason (1987) reported no effect. Killick (1995) found ambiguous effects and Conway (1994) argued that while growth declines in the first year of a program, the negative effects diminish thereafter. Przeworski and Vreeland (2000) argued that if growth is the primary objective of the SAPs then these programs are badly designed. Indeed, their results indicate that countries that do not enter into SAP grow faster than those that do.

In relation to Jordan, the effect of the SAPs on growth can be seen in Table (6.2). The sharp reduction in the growth rate prior to the program (-3.7) (-16.7) in 1988 and

1989 (the year of the economic crisis), respectively, turned to high growth rates, higher than had been predicted (17), (5.8), (7.8) and (3.9) for the period 1992-1995. Unfortunately the high growth rates were not sustained after 1995. Indeed, the dismal economic performance of the Jordanian economy after 1995 is made clear in Table (6.2), with stagnating economic growth and humble or negative per-capita income growth rates. By 1999, the growth rate had improved to an economic growth rate of 4.2 per cent in 2001. Statistically, there is not enough evidence to believe that SAPs have any effect on economic growth, Table (6.6).

Table (6.2)*
Growth Rate and Real Income (pre- and post-program)

	Growth Rate (%)	Per-capita Real Growth Rate (%)	**Gross Capital As percent of GDP
1984	4.5	0.3	26.6
1985	-1.2	-4.8	19.0
1986	7.1	3.2	19.0
1987	2.3	-1.3	20.3
1988	-3.7	-7.1	22.7
1989	-16.7	-19.6	23.4
1992	17.0	-10.2	30.0
1993	5.8	28.2	34.2
1994	7.8	2.4	33.1
1995	3.9	3.9	30.2
1996	1.0	-7.6	30.0
1997	1.3	2.3	25.8
1998	1.7	2.4	21.1
1999	3.1	-0.8	23.5
2000	4.0	0.3	25.6
2001	4.2	-0.2	27.1

Source: CBJ (1984-2001) Annual Report” “Researcher Calculations”

** The table excludes the years where the SAP has been suspended.*

***Represents expenditures on fixed capital goods plus change in stocks*

From Table (6.2) we can see how the economic growth rates performance are associated with the changes in gross capital as percent of GDP. The economic growth increases when the gross capital increases and when the former decreases the later also decrease.

With respect to private sector investment during the program period, despite the market reforms undertaken by the government under SAPs, the fact remains that Jordan's private sector investment has been disappointing during 1990s [Carroll, 2003: 93-99]. This is not surprising according to Carroll (2003) considering that the business community is still plagued by government policies and practices that make business difficult.

Carroll explains that the limited information provided regarding forthcoming policy changes, the business community's limited role in policymaking and Jordanian bureaucracy imposes huge costs on business operations and delays their investment². According to EIU (1998: 15), the government's failure to improve the investment climate has not only discouraged foreign investors, but has also pushed growing numbers of Jordanian investors to look to other countries, such as Egypt and Dubai, for investment opportunities, see FDI figure in Jordan, Appendix (iii).

In connection with per-capita income, the table indicates that per-capita income growth had improved associated with the mini boom at the beginning of the program. However, it turned into a negative or humble growth rates. Practically, not

all the citizen reaps the fruits of this positive economic growth in the initial years of SAP. This is because economic growth has been concentrated in some sectors such as construction, finance, transport and communications, due to the return of 300,000 Jordanians from Kuwait, where majority were able to liquidate their assets which they channeled into property construction and new businesses. Simultaneously, the agricultural sector suffered from a serious fallback with (-8.5), (-29.3) growth rates in 1996 and 1999, respectively and humble growth rates in other years [CBJ, 1999]. Fixed income earners were also affected negatively due to the high taxes associated with SAPs where some studies indicate that the tax burden in Jordan is high constituting 20-25 per cent of per capita income [Henry, 2003].

As is apparent from the table, the growth rate seemed to recover after almost 10 years under comprehensive SAPs. Although the world economy suffered from recession in 2001, as a consequence of the 11 September attack, the Jordanian economy achieved 4.2 per cent economic growth. However, achieving sustainable economic growth higher than the population growth rate remains a future challenge for Jordan, particularly in a region, which is undergoing comprehensive political and economic liberalization and regime changes, which might be stronger than the economic reforms that Jordan is undertaking.

6.3.2 The Fiscal Policy Performance

The reduction of the budget deficit in Jordan initially involved the dual solution of reforming tax systems to improve the revenue-raising ability of the government, and

reducing the overall level of public sector activity. It is notable that although, the country suffered from a substantial decline in the external fund in the early 1980s, as explained in Chapter Two, Table (6.3) shows that the government followed an expansionary policy in the second half of 1980s (contrary to what was expected in such circumstances) which was based on running down reserves and foreign borrowing. Therefore, foreign debt increased from 123.3 per cent of GDP in 1984 to 187 per cent in 1988 as shown in Table (6.3). In the light of what has been explained in Chapter Two, the conclusion we might be able to draw here is that both external and internal factors (mismanagement of the economy) were responsible to the major economic crises in 1988/1989.

Table (6.3) shows the main contributions to the budget deficit reductions as a proportion of GDP. It seems that both expenditures and revenues contributed to the fiscal deficit reductions. On the revenues side, the main increase was as a result of non-tax rises rather than through tax-revenue, which might give an indication of the slow implementation of tax reforms. On the expenditures side, Table (6.3) indicates that the reduction in expenditure was mainly as a result of cuts in capital expenditure.

Surprisingly it does not seem that there was any reduction in current expenditure, on the contrary, it appears that there was an increase in the country's expenditure after 1995. In recent years, IMF policy advice to its members has placed greater emphasis on the need for discipline through reductions in unproductive public expenditure (current expenditure).

Table (6.3)*
Fiscal Deficits (pre-and post-program)

	1984	1985	1986	1987	1988	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Revenue (GDP%)															
Tax Revenue	15.4	15.7	14.3	14.7	15.1	23.3	21.5	21.1	16.4	17.8	15.5	15.3	15.3	16.1	16.3
Non Tax Revenue	5.5	6.1	9.5	9.3	8.9	10.1	9.8	10.1	15.0	12.5	11.6	11.4	12.2	10.0	10.0
Grants	5.4	9.3	6.6	5.8	6.9	3.9	4.3	4.2	3.8	4.7	4.0	3.6	3.4	4.0	4.0
Domestic Revenue	20.9	21.8	23.8	24.1	24.0	33.2	31.3	31.6	31.2	30.4	27.2	26.7	27.5	26.1	26.2
Expenditures (GDP %)															
Current Expenditure	24.6	26.9	21.6	27.3	29.6	26.6	27.4	26.6	26.5	30.8	29.7	29.3	28.5	28.7	28.6
Capital Expenditure	11.7	13.0	18.19	16.4	17.0	12.0	15.8	11.0	7.2	7.7	5.6	6.5	5.2	4.8	5.2
Total Expenditures	36.4	39.9	45.4	43.7	46.6	38.6	43.2	37.7	36.7	38.2	37.1	36.6	34.8	33.5	33.2
Budget Deficits (GDP %)															
Budget deficit (excluding grants)	15.4	18.1	21.6	20.1	22.5	9.1	6.1	6.1	5.1	7.8	10.4	10.0	7.3	7.4	7.0
Overall Budget Deficit	-2.2	1.9	-3.5	-4.4	-4.4	9.7	-2.9	3.9	-1.7	-3.2	-5.6	-6.4	-3.9	-3.4	-3.1
Outstanding External Debt (GDP %)	123.3	147.7	156.7	167.3	187.3	131.1	111.0	93.4	96.6	100.3	89.2	89.90	89.9	80.1	75.9

Source: CBJ (1984 - 2001) "Annual Report"

* The table excludes the years where the SAP has been suspended.

"Researcher calculations".

To shed some lights on this subject, an internal study was undertaken by the IMF (Fiscal Affairs Department) to assess the nature and depth of this advice for a sample of 17 member countries (11 of which had adjustment programs, including Jordan) for various periods during 1990-1995. The main elements of the IMF's policy advice on reducing unproductive expenditure in IMF program countries covered four areas, summarized in the IMF Survey (1997b) as follows:

- (i) *Wages and Salaries*: as a reflection of both inappropriate wages policy and overstaffing, the outlays on wages and salaries have been a major source of excessive public spending. The IMF recommended a lower wage bill in all countries with IMF-supported adjustment programs. The IMF staff specifically identified an excessive number of ministries and duplications of functions.
- (ii) *Subsidies and Transfers*: the IMF advice to the countries with IMF-supported adjustment programs emphasized establishing more cost-effective social safety nets.
- (iii) *Military Expenditure*: the IMF recommendation emphasized that excessive military expenditure imposes a heavy fiscal burden on adjusting countries. Consequently, the IMF's advice on such spending often called for reviewing military expenditure to identify potential fiscal savings.

- (iv) *Health and Education*: the IMF recommended a shift in the pattern of expenditure to accommodate increased spending in the previously neglected sectors of primary health care and basic education in many countries with IMF-supported adjustment programs. The IMF policy advice in these areas also focused on the powerful links between social spending and education and health indicators.

With regard to the Jordanian experience in reducing unproductive expenditure, according to Abu-Hammour (2000) the reasons why it was so difficult for Jordan to reduce unproductive expenditure, as shown in Table (6.3), is that Jordan had obligated some 25 per cent of its budget to pay back its foreign debt and accumulated interest, which was considered part of current expenditure. Moreover, it was so difficult in the short-run to reduce some current expenditure items such as salaries, wages, pensions, purchase requirements and other emergency expenses, because such items are inelastic in the short-run.

The government procedures to reduce current expenditure include sharp cuts in its subsidies of basic commodities like bread and fuel oil. In fact the IMF agreed to extend the country's three-year (US\$ 174 million) Extended Fund Facility for the period 1999-2001 on the basis that the government should implement the price rises. According to the Finance Minister, subsidizing of oil derivatives costs the government about JD 115 million (US\$ 162 million) a year, while the cost of

subsidizing bread, barley and bran is estimated at JD 45 million (US\$ 64 million) [MEED, 2002b].

In the area of military expenditure, the statistics refers to the fact that Jordan's defense expense decreased from an average 35 per cent of total expenditure in the 1980s to nearly 25 per cent in the 1990s [CBJ, 1996]. As far as education expenditure is concerned, Jordan's development strategy has emphasized the social and human resources dimensions. Expenditure on education accounted for 7.3 per cent of GNP in the 1990s [World Bank, 1999].

With respect to health expenditure, although Jordan does not have a formal health insurance system, the coverage of the current health system is quite comprehensive, about 80 per cent of the population has some formal public or private insurance coverage and the Ministry of Health acts as a last safety net for people without coverage [Alonso-Gamo and El-Erian, 1997]. However, associated with SAP recommendations and with fewer resources available for social expenditure, the focus has been on increasing efficiency and targeting in order to protect the lower-income groups.

In the last working visit to Jordan in 2003 a team from the IMF completed a review of the current and last economic arrangements with Jordan leaving the government with a number of recommendations regards the budget deficit to be completed by the end of the 14-years old structural reform programs. According to the IMF team, the

biggest challenge for the government lies in compensating the treasury for the loss of the Iraq oil grant. Jordan's US\$ 5.5 million worth of oil supply from Iraq was halted at the outbreak of war in 2003. The oil was provided under a protocol giving Jordan half of the 5.5 million of oil annually for free and the remainder at preferential rates. Accordingly, the IMF team recommended to the government a move to market-based prices to compensate for lost revenue. As a result, the full price went up by different percentages. On the other hand, the government's obligation in keeping the budget deficit to 2.5 per cent of GDP, by the end of the SAPs, pushed it into taking serious measurements to reduce unproductive expenditures, mainly ministerial expenses such as cars, communications, extra travel, fuel and electricity bills.

Recently, the Jordanian Minister of Finance announced that such expenses will be reviewed and might eventually be slashed [Aloul, 2003]. This is an indication of bad fiscal deficit management by the government. Indeed the government needed 14 years to realize the importance of cutting extra and luxury ministerial expenses, while food subsidies was cut in the first year of the program. This shows that the SAPs package were far more concerned about cutting food subsidies.

Generally speaking, the fiscal adjustment made by Jordan is impressive when compared with the budget deficit to GDP of 22.5 per cent in 1988, before the program, to about 7.0 per cent of the GDP in 2001. Although the focus of the programs was mainly on fiscal aspects, stipulating that Jordan should reduce its fiscal deficit to 4 per cent of GDP (excluding grants) in 10 years, the government,

however, lost its fiscal discipline after 1995 causing the budget deficit to rise to more than 10 per cent in 1997. The government indeed has underscored the potential benefits of reducing unproductive expenditures for achieving equitable and efficient fiscal adjustment.

6.3.3 The Monetary Policy Performance

Concurrent with fiscal discipline, the short-run burden of controlling inflation and macroeconomic adjustment in the program's countries falls on monetary policy. Consequently, tight monetary policies are required not only to control inflation but also, to prevent sharp rises in balance of payments deficits and to maintain financial stability. As explained in Chapter Three, the theoretical underpinnings of the IMF's monetary policy recommendations are grounded in a monetary approach to the balance of payments. Virtually all SAPs involve restrictive monetary policies, specifically ceilings on the rate of domestic credit expansion, whether imposed by the banking system as a whole or by the central bank.

Table (6.4) shows that prior to the adjustment programs, all monetary indicators were extended. The increase in government expenditure (as explained before) led to a rapid rise in domestic credit and the money supply, which in turn accentuated the decline in international reserves. The effects of the SAP on monetary policy can be seen in the same Table (6.4). The sharp reductions in domestic credit and the money supply, the key elements in SAPs, were met during the program period.

Table (6.4)*
Behavior of the Monetary Policy (pre- and post-program)

	Domestic Credit as Percent of GDP	Domestic credit to central government (growth rates)	Domestic credit to privet sector (growth rates)	Ms1 (growth rates)	Ms2 (growth rates)	Reserve (US\$) Million	Inflation Rates
1984	16.7	23.8	14.1	1.2	8.8	0.551	3.7
1985	9.8	17.1	5.6	-3.4	6.7	0.422	3.2
1986	5.2	9.8	8.3	5.8	10.5	0.437	1.0
1987	19.5	69.1	4.5	10.2	14.5	0.424	1.1
1988	20.4	56.4	8.3	20.6	13.0	0.109	6.5
1992	16.7	-33.6	9.4	7.2	12.8	0.767	4.1
1993	3.2	-34.0	14.8	0.8	6.7	1637	3.3
1994	12.0	-19.2	19.6	0.9	8.0	1692	3.5
1995	9.8	-19.5	15.7	0.3	6.6	1972	2.4
1996	0.6	-46.2	5.1	-11.8	0.3	1759	6.5
1997	1.7	-54.2	5.8	6.7	7.7	2200	3.0
1998	14.2	32.3	7.8	-1.7	7.6	1750	3.1
1999	3.1	3.9	6.6	10.1	11.0	2629	0.6
2000	1.8	-21.3	4.5	14.0	10.2	3331	0.7
2001	11.0	40.1	11.3	4.6	5.8	3062	1.8
Source: CBJ, (1984-2001) "Annual Report"							"Researcher Calculations".

* The table excludes the years where the SAP has been suspended

It is interesting to see how the two components of domestic credit behaved before and after the program, as the credit extended to the government was high while the credit extended to the private sector was small before the program. In the period after the program, the two components were adjusted to maintain the net domestic credit ceiling in the program. Thus, as the credit extended to the government declined sharply during the program period, the credit extended to the private sector expanded slightly to maintain the net domestic credit ceiling and to meet the IMF recommendations.

From this table one can conclude that the fundamental assumption underlying the SAPs that monetary authorities in developing countries are able to control money supply and credit is quite justified in the case of Jordan. The most striking development from the implementation of monetary reform is the sharp increase in foreign reserves. In 1988 the country's reserves were US\$ 109 million, which increased to US\$ 3062 million in 2001, after 10 years of SAPs.

In fact, the actual international reserves have developed far more favorably than had been anticipated in the program during the period 1992-1998. What is clear too is that the tight monetary stance achieved a rapid decline in the inflation rate. The table indicates that the inflation rate declined from 6.5 per cent in 1988 to about 2.4 per cent in 1995. However, statistically the u-test fails to reject the null hypotheses therefore; the conclusion is that the SAPs had no effect on the inflation rate in Jordan.

6.3.4 The External Sector Performance

With respect to the external sector, the 1992 and the subsequent structural adjustment programs encouraged the authorities to follow policy reforms of the foreign sector that would be consistent with a market-based outward economy, which would help revitalize the private sector and make it more integrated into the global system.

In Jordan, diversifying the export base and the geographical distribution of exports was of paramount importance in order to achieve export-led growth. Indeed, Jordan registered partial success in this area. This included the accession to the (WTO), the ratification of the US Jordan Free Trade Agreement (FTA), the EU-Jordan Association Agreement and the establishment of special free trade areas such as the Qualifying Industrial Zones (QIZs). All these developments had a visible impact in boosting Jordan's exports, as shown in Table (6.5). Practically, Table (6.5) indicates that the volume of foreign trade has increased during the SAPs when seen in relation to GDP, which is a sign that the economy has become as roughly liberalized and outward oriented as was hoped by the advocates of reform process.

Table (6.5) shows that the adjustment programs have not brought about any substantial change in Jordan's chronic trade deficit. Indeed, the continual growth in imports would make the reduction of the trade balance slow and more difficult. This is because Jordan's heavy dependence on imports for industrial inputs and energy cannot be overcome in the foreseeable future. Statistically, the u-test indicates that

there is no evidence to reject the null hypothesis (trade balance pre = trade balance post) thus; the conclusion is that the programs had no effect on the trade balance.

Table (6.5)*
The External Sector (pre-and-post program)

	<i>Export As percent of GDP</i>	<i>Exports growth rates %</i>	<i>Imports As percent of GDP</i>	<i>Imports growth rates %</i>	<i>Trade Balance As percent of GDP</i>	<i>Reserve Us \$ Million</i>	Foreign Trade AS percent of GDP
1984	14.7	38.0	54.0	-3.0	-39.3	0.551	68.6
1985	15.4	6.9	53.1	0.3	-37.7	0.422	68.5
1986	11.8	-17.6	39.2	-20.9	-27.4	0.437	51.0
1987	14.3	23.3	41.3	7.6	-27.1	0.424	55.6
1988	16.9	20.8	45.1	11.8	-28.2	0.109	61.9
1992	23.7	7.6	63.4	29.4	-40.0	0.767	87.1
1993	22.7	4.3	64.4	6.9	-41.7	1637	87.1
1994	23.8	15.1	56.4	-3.7	-32.6	1692	80.1
1995	26.9	24.7	56.1	9.6	-29.2	1972	82.9
1996	27.3	3.8	64.6	17.5	-37.3	1759	91.9
1997	25.3	1.1	56.6	-4.5	-31.3	2200	81.9
1998	22.8	-1.8	48.4	-6.7	-25.6	1750	71.2
1999	22.5	1.6	45.7	-2.9	-23.2	2629	70.0
2000	22.6	3.6	54.4	23.7	-31.9	3331	76.8
2001	26.0	20.9	54.9	7.2	-28.9	3062	80.9

Source: CBJ (1984-2001) “Annual Report” *“Researcher calculations”*
** The table excludes the years where the SAP has been suspended.*

Specifically, while there is evidence to believe that exports performance has improved after the program, as shown in Table (6.5), this improvement, however,

was not coupled with a reduction in the imports as the program predicated. A number of factors may help to explain the performance of imports. Firstly, Jordan's trade regime has been undergoing substantial changes since 1989. Reform effects and freedom under SAPs have been conditional and strong and almost all areas of the economy have been opened. Import licensing restrictions on intermediates and capital goods have been mostly eliminated, quantitative restrictions on imports have been replaced by tariffs and tariffs have been also reduced.

Secondly, although Jordan has devalued its currency by about 50 per cent during 1988-1990, it does not seem that it helped to reduce imports as anticipated. This is due to the fact that more than 50 per cent of Jordan's imports are concentrated on raw materials and intermediate goods, which are essential to the development process and are likely to be price inelastic in developing countries like Jordan. Finally, large growth in imports, particularly following the return of more than 300.000 Jordanians between 1991/1993, increased the trade deficit during this period.

Clearly Jordan has reaped the potential benefits from the liberalization of its trade sector. In particular, Jordan's total exports to GDP were almost twice what they were before the SAP. However, in some respects, Jordan's exports growth rate is not enough when compared to Asian countries, where the export sector played a vital role in boosting economic growth rates.

Table (6.6)
Mann-Whitney Test Results*

Variables	Alternative Hypothesis	Significance Level
Growth Rate	Post < Pre	0.744
Inflation Rate	Post < Pre	0.153
Trade Balance	Post < Pre	0.165
Exports	Post > Pre	0.000
Imports	Post < Pre	0.568
International Reserve	Post > Pre	0.001

* The tests have been performed using (SPSS, 11)

6.4 Conclusion

In this chapter, an attempt has been made to evaluate the Jordanian experience under the SAPs. The chapter provides a detailed and comprehensive comparison of program performance with regard to the main macroeconomic indicators; more emphasis has been made to assess the macroeconomic effects of Jordan’s SAPs using the target-actual evaluation methodology and the before-after approach.

The target-actual approach shows that Jordan’s SAPs managed to achieve their targets but to different degrees. In this regard, the inflation rate and the current account were over-performance. The economic growth and the trade balance were under-performance. With regard to the budget deficit performance, the SAP registered a failure in meeting its target. However, according to the before-after approach, the statistical tests show different outcomes, while there was no effect on the economic growth, the inflation rate and the trade balance, the program proved to have a significant positive impact on the exports and the international reserves.

In connection with the economic growth and the performance to grow at the targeted rates, two points relating to growth rated performance have been highlighted. The first is that the over-performance in the initial years of SAPs (1992-1995) was caused by external factors (non-program factors) resulting from the Jordanian returnees and their consumption. The second point is that the failure of GDP to grow at the targeted rate was associated with the decline in gross investment during (1997-1999), as shown in Table (6.2).

In relation to the budget deficit performance, the results also reveal that the budget deficit average in the 1980s has significantly declined from 21.8 per cent of GDP to an average of 7.6 per cent of GDP during the program period. However, the target-actual approach shows that reducing the budget deficit remains a significant target has not been achieved yet. In this regard, the results of our evaluation exercise indicate that the target figures are unrealistically optimistic, particularly in a country where the government is still the major player and the privatization program was initially slow and only began in earnest in late 1998.

Another point which has been highlighted in connection with reducing the government's budget deficit is that although the IMF emphasizes on the need for discipline by reducing unproductive expenditures, it seems that the reduction in government expenditure was mainly as a result of cuts in capital expenditure rather than on current expenditure (unproductive expenditure). These results indicate that

Jordan's experience has underestimated the potential benefits of reducing unproductive expenditure in order to achieve efficient fiscal adjustment.

It was found that the reduction in the inflation rate was associated with the decline in money supply growth. In this regard the results are broadly in line with the view expressed by the IMF. However, it has been noticed also the actual reduction in the inflation rate was largely bigger than had been anticipated, Table (6.1), so these results might reveal the deflationary nature of the SAPs packages. The most striking development from the implementation of monetary reforms is the sharp increase in foreign reserves, which also is in line with the view expressed by the IMF.

Finally with regard to trade balance performance, the result shows that they were partly successful in reducing the trade deficit, mainly due to the increase in Jordan's exports. However, the results indicate an unsustainable trade balance position during the SAPs period.

Endnotes

- ¹ According to one report the refugees brought in about US\$ 1.5 billion much of it for housing construction. This was a massive infusion into an economy with GDP US\$ 5 billion in 1992. See Kanovsky (1997).
- ² According to Carroll (2003: 95-99) some Jordanian businessmen argued that private investment failure to respond to policy change was a result of the poor regional and international climate. However, others indicate that there would naturally be a time lag between policy change and the private sector response. Indeed, more empirical study needed to explain the behavior of the private sector during the SAPs period.

CHAPTER SEVEN

THE MACROECONOMIC EFFECTS OF JORDAN'S SAPs: AN ECONOMETRIC APPROACH

7.1 Introduction

In the previous chapter an attempt has been made to assess the macroeconomic effect of Jordan's SAPs, using before-after approach and target-actual approach. In this chapter, econometric approach /time series will be used to evaluate Jordan's SAPs. Specifically, the aim is to examine the effects that typical SAPs may have on five macroeconomic variables: the economic growth (RGDP), the inflation rate (INF), the international reserves (RES), the exports (EXP) and the imports (IMP).

Applied economists have been aware of certain difficulties that arise when unit roots are present in the data series. However, ignoring this fact and proceeding to estimate a regression model containing non-stationary variables, as pointed out by Harris and Sollis (2003: 1) at best ignores important information about the underlying statistical processes generating the data, and at worst leads to what Granger and Newbold (1973) call "spurious regression."

One consequence of such discoveries is that it has now become a common practice to test for non-stationarity of economic time series data prior to any econometric estimation. Therefore, in the light of recent advances in time-series econometrics, this chapter starts the estimation process by testing the time series properties of the

data. To do so, concepts and definitions of the methodological procedure for testing for unit roots and cointegration are outlined. The Augmented Dickey-Fuller (ADF) test and Johansen technique were used for testing for unit roots and cointegration. The empirical results and the estimations are reported at the end of this chapter.

7.2 Concepts and Definitions

7.2.1 Unit Root Test

As our empirical research involve time-series, the distinction between stationary and non-stationary becomes very important because assuming time-series are stationary when, in fact, they are not, can produce very misleading results. Particularly the assumptions of the classical linear regression model necessitate that the series of all the variables entering the standard regression model are stationary and that the errors have a zero mean and finite variance. In the presence of non-stationary variables, there might be what Granger and Newbold (1973) call a ‘spurious regression’ in which regression coefficients appear statistically significant and have a high R^2 even when the variables are, in fact, unrelated.

A time series is said to be stationary if its mean, variance and auto-covariance remain the same no matter at what point we measure them, that is, they are time invariant. Such a series may be said to be integrated of order zero, $I(0)$. If, however, a time series is non-stationary and needs to be differenced once to induce stationarity, the series is said to be integrated of order 1, $I(1)$. Similarly, if a time series is $I(d)$, we obtain an $I(0)$ series, after differencing it to (d) times. In this regard Engle and

Granger (1987) pointed out that although first differencing may induce stationarity, first differenced regressions could also filter out long run information when the variables in the levels are cointegrated.

The investigation of stationarity or (non-stationarity) in time series is closely related to the test for unit roots. Existence of unit roots in a series denotes non-stationarity. This preliminary step is important in any test for the existence of a long-run co-integrating relationship. In practice, although the order of integration of a variable is often obvious from a visual inspection of the time plots of the series; however, appropriate statistical tests are needed because what might appear to be stationary to one researcher may not necessarily be of the same view to another.

Indeed, the literature on time series suggests a number of alternative tests for testing whether a series is stationary. One of the most widely used methodologies (because of its simplicity and general nature) to establish the order of integration of the variables is the Augmented Dickey-Fuller (ADF) test [Dickey and Fuller, 1979, 1981]. The (ADF) test for unit roots indicates whether an individual series, say (y_t) is stationary by running regression. The simplest form of the Dickey-Fuller test amounts to estimating the following auto-regressive model:

$$\Delta Y_t = \alpha Y_{t-1} + \sum_{i=1}^k \beta_i \Delta Y_{t-i} + U_t \quad \dots (1)$$

Where (ΔY) is the first differences of the series, (k) is the number of lags and (t) denotes to the time period. Note that equation (1) does not contain any intercept. An ADF test, however, can be extended to allow for the possibility that the underlying data generating process (d.g.p) of (Δy) contains a stochastic trend with drift. This would require extending (1) to give:

$$\Delta Y_t = \mu + \rho Y_{t-1} + \sum_{i=1}^k \beta_i \Delta Y_{t-i} + U_t \quad \dots (2)$$

Similarly, equation (1) could be further augmented to allow the underlying (d.g.p) of (y_t) to contain deterministic components (i.e. a constant and time trend). In general, the models are needed to test for the null hypothesis that a series does contain a unit roots (i.e. it is non-stationary) against the alternative of stationarity. Thus, the ADF tests for the model that contains a stochastic trend and constants can be formed as follows:

$$\Delta Y_t = \mu + \lambda_t + \rho Y_{t-1} + \sum_{i=1}^k \beta_i \Delta Y_{t-i} + U_t \quad \dots (3)$$

Rejection of the null hypothesis ($\rho = 0$) in favour of the alternative ($\rho < 0$) implies that (y_t) is stationary and hence integrated of order zero, $I(0)$. If the null hypothesis is not rejected, then (y_t) has a unit root and is integrated of order 1, {i.e. $y_t \sim I(1)$ }. The lag length (k) could be chosen either by some arbitrary criteria, or more usefully, at the length necessary to whiten the residuals [Price, 1998: 163]. However, according to Charemza and Deadman (1992: 135) the practical rule for establishing the value of

(k) is that it should be relatively small in order to save degrees of freedom, but large enough not to allow for the existence of autocorrelation in U_t .

7.2.2 Cointegration Test

The cointegration concept, first introduced by Granger (1981), is relevant to the problem of the determination of long-run relationships “equilibrium” in economics. Statistically, cointegration is the implication of the existence of a long-run relationship between variables [Thomas, 1993]. According to Linda and Dimitri, (1993) a long-run relationship means that the variables move together over time, so that short-run disturbances from the long-run trend will be corrected. However, the economic interpretation of cointegration is that if two or more series are linked to form an equilibrium (move closer together) in the long-run, even though the series themselves are trended (i.e., are non-stationary) they will nevertheless move closer together over time and the difference between them is constant (i.e., stationary).

Thus, it is possible to make sense of regressions involving non-stationary variables, if there is cointegration, and then regression analysis imparts meaningful information about long-run relationship [Harris and Sollis, 2003]. A lack of cointegration suggests that such variables can wander arbitrarily far away from each other, which implies they have no long-run relationship [Dickey, *et. al.*, 1991].

There are a number of different ways that can be used to test for the existence of cointegration. In the following we utilised the Johansen (1988) and Johansen and

Juselius (1990) method for the empirical analysis. The Johansen-Juselius technique, tests and estimates for the existence of cointegration relationships within a multivariate Vector Auto-Regression (VAR) framework, involving (k) lags of (X_t) [Harris and Sollis, 2003: 110-115].

$$X_t = A_1 X_{t-1} + \dots + A_k X_{t-k} + u_t \quad \dots (4)$$

Where X_t is an ($n \times 1$) column vector of observations on the system.

A_1 is an ($n \times n$) matrix of parameters.

U_t is an ($n \times 1$) column vector of error terms.

The system is a reduced form with each variables in (X_t) regressed on only lagged values of both itself and all the other variables in the system. Using $\Delta = 1 - L$, where L is the lag operator. The statistical model in equation (4) can be rewritten as a Vector Error Correction Model (VECM), of the following form:

$$\Delta X_t = \Gamma_1 \Delta X_{t-1} + \dots + \Gamma_{k-1} \Delta X_{t-k+1} + \Pi X_{t-k} + u_t \quad \dots (5)$$

Where $\Gamma_i = -(I - A_1 - \dots - A_i)$ ($i=1 \dots k-1$) and,

$\Pi = -(I - A_1 - \dots - A_k)$ is the matrix of long-run coefficients.

This way of specifying the system contains information on both the short-run and long-run adjustment to changes in (X_t). In other words, the key insight of the Johansen-Juselius cointegration technique is that if there is a genuine long-run

relationship, according to Price (1998: 166) this test can be simplified by assuming that we have a set of variables $(y, x, z) \sim I(1)$; that is, each variable is non-stationary, and needs differencing once to obtain stationarity. Thus, for long-run relationships to exist among these variables, we require that a vector $(\beta_1, \beta_2, \beta_3)$ exists such that:

$$\beta_1 Y_t + \beta_2 X_t + \beta_3 Z_t = u_t \sim I(0) \dots (6)$$

Basically, there is a linear combination of (y, x, z) which is stationary. In these cases, (y, x, z) is referred to a cointegration set, with an associated cointegrating vector $(\beta_1, \beta_2, \beta_3)$. However, in the absence of any cointegration amongst the variables, one may have the advantage of adopting the Vector Auto-Regression model (VAR), dynamic time series simultaneous system. This is because (VAR) is a system of simultaneous auto-regression equations allowing for non-linear relationships amongst variables in a multivariate setting. Nevertheless, applied economists tend to consider (VAR), as a last resort for modelling purpose since its theoretical property is less appealing [Taghavi, 2000].

7.2.3 The Error Correction Model

In the literature, the notions of cointegration and the Error-Correction Mechanism (ECM) are closely linked. Originally the ECM according to Clarke, *et. al.*, (1998) was developed in an engineering control environment and first used in economics by Phillips (1954, 1957). Subsequently it was used by Sargan (1964) in his paper on wage and price determination, and then popularised by Davidson, *et. al.* (1978) in a

widely cited paper [Price, 1998: 167]. In fact, if cointegration relationships among variables exist, according to Engle and Granger (1987) there must be an error-correction specification that can be applied to the data. This result is known as the Granger Representation Theorem¹ - so that it is possible to analyse non-stationary series, which are cointegrated using an Error-Correction Model (ECM) specification. Indeed, in simple terms, if we estimate an ECM for a set of $I(1)$ variables then they must be cointegrated, for this to be a valid regression, or, in the other words, if they are cointegrated, then the lagged equilibrium error (e_{t-1}) is stationary and regression is valid. Obviously, if one concludes that the series are non-stationary and cointegrated, it is appropriate to model them in error-correction form. As illustrated by Clarke, *et. al.* (1998: 145) assuming that we have two series (y_t) and (x_t) hypothesising that the (y_t) is a function of the (x_t), then the ECM will take the form:

$$\Delta Y_t = \beta_0 + \beta_1 \Delta X_t + \beta_2 ECM_{t-1} + u_t \quad \dots (7)$$

Where: Δ = difference operator (i.e. $x_t - x_{t-1}$)

B_0 = constant

B_1, B_2 = regression coefficients

ECM = error-correction mechanism, derived from the cointegration regression.

U_t = error term.

The main feature of the ECM is that all terms in the model are stationary, so standard regression techniques are valid. In addition, it provides a useful and meaningful link

between the long-run and short-run approach to economic modeling.² From what has been discussed so far, the modelling strategy to be adopted in dealing with time-series suspected of being non-stationary, suggests a straightforward approach as has been illustrated in literature [Clarke, *et. al.*,: 144] as follows:

- (i) Test the series to determine if they are non-stationary, by employing Augmented Dickey-Fuller (ADF) tests, where the null hypothesis is that a series has a unit-root. If all of the series are stationary then model them in level form. However, if two or more series are non-stationary then move to point two.
- (ii) Test to determine if the non-stationary series are cointegrated by applying the Johansen-Juselius maximum likelihood method of cointegration. If they are not found to be so, then model them in differenced form. However, if the non-stationary series are cointegrated then move to point three.
- (iii) As the non-stationary series cointegrated then they may be modelled in error-correction form and estimated using standard OLS methods.

In the following section we will apply the above modelling strategy in dealing with Jordanian time series for in the period (1972-2001) for the purpose of evaluating the effectiveness of Jordan's SAPs. Data definition, measures and sources are cited in an Appendix (i).

7.3 Test for Stationarity

The empirical investigations begin by examining the basic time series properties of the data. Using annual data for the period 1972-2001, first we employed the ADF test to determine the degree of integration of each variable. Given that the sample has limited observation only 30 years, the lag length was selected based on one year. On the other hand, the tests are performed in natural logarithms, constant and linear time trend terms are included in each test as a visual inspection reveals that the series may exhibit a trend.

The results of the ADF test applied to level and first difference are reported in Table (7.1). The values given in this table are the equivalent of calculated student t-test in the level (L), first difference (Δ). According to the test if a variable is found to exhibit a calculated ADF value larger than the critical value of Dickey-Fuller at say (5) per cent significance, the variable is said to be stationary. The results of these tests are presented in Table (7.1) with critical t-statistics for the ADF test at the (1), (5) and (10) per cent significance levels, as computed by Mackinnon (1991). Although the tests failed to reject the null hypothesis of non-stationary for most of the series in their levels (confirming the existence of unit roots), in the levels of some variables (*EP*, *ER*) the ADF test does confirm stationarity at the (1) per cent and (5) per cent significance levels.

Since in some levels not all the variables appear to be stationary, the next step is to determine whether they are stationary after taking first differences. In other words,

this amounts to test whether the variables are $I(1)$. The results of the ADF test in the first differences (Δ) are shown in Table (7.1). The results indicate the rejection of the null hypothesis of non-stationarity. Therefore, confirming stationarity for all of the variables at 1 per cent and 5 per cent significance levels, except that (*INT*) and (*Ms*) were significant at the 10 per cent level. However, for consistency, we treat them as stationary variables at the first difference. Thus, the conclusion is that the null hypothesis of non-stationarity is consistently rejected for all variables expressed at first differences.

7.4 Test for Cointegration

We are now in a position to apply Johansen and Juselius technique to test the existence of cointegration in the underlying series. Their method applies the maximum likelihood procedure to determine the presence of cointegration vectors in non-stationary time series. The Johansen and Juselius provide more robust results when there are more than two variables [Gonzalo, 1994]. The test based on maximum likelihood estimation procedures, amounts to calculating two test statistics known as λ -Max and Trace which are used to determine the number of cointegrating vectors. The Johansen test of cointegration here attempts to compare the size of the estimated λ -Max and Trace against its critical values at 5 per cent and 1 per cent significance levels. Cointegrating hypotheses are rejected if the former estimates exceed their critical values.

The results of the λ -Max and Trace are reported in Tables (7.2 a, b, c, d, e). Starting with the null hypothesis of no cointegration ($r = 0$), the results of the both λ -Max and Trace tests showed that the null hypothesis of no cointegration among all variables that enter into our models (except the import model) can be rejected at both 1 and 5 per cent levels of significance. Moreover, the λ -Max and Trace tests show that the null hypotheses of $r \leq 1$, $r \leq 2$ also can be rejected at the 5 per cent level of significance for the *RGDP*, *RES*, *EXP* and *INF* models.

Consequently, there are at least two cointegrating relationships involving our variables included in the models mentioned above, apart from import model. Among the variables of the import demand model, there was only one cointegrating vector according to Trace test at the 5 per cent significance level. However, turning to the λ -Max test, the test fails to reject the null hypotheses of ($r = 1$) at any of the significance levels.

Our conclusion is that by relying on at least the Trace test, the null hypothesis of no cointegration can be rejected for all our variables included in the models at the 5 per cent level of significance and this suggests that there is a cointegrating vector. Therefore, our annual data from 1972-2001 appears to support the proposition that in Jordan there exists a stable long-run relationship between the variables in our models.

7.5 Application and Findings

The aim of this section is to identify through econometric modelling the effect of structural adjustment programs on the macroeconomic performance of Jordan. Specifically, the objective of our econometric procedure is to estimate the effects that a typical SAP's policies may have on the main macroeconomic targets. The ideal approach to investigating the macroeconomic impact of SAPs is to undertake regression analysis over the entire period of the SAPs 1992-2001.

Our analysis is, however, severely constrained by the fact that only annual data, not quarterly data is available for most of the variables under consideration. As such it is not feasible to undertake estimation analysis meaningfully for the program period 1992-2001. As an alternative, we will run our analysis for the period 1972-2001 with a dummy variable included in the models to capture the effects of the SAPs³. Consequently, if the estimated coefficient of the dummy variable in any given model is statistically significant we can then argue that the SAPs have affected the macroeconomic targets. On the other hand, the other estimated parameters will reveal the effectiveness of the program policy tools as well as the impact of external variable. The following models examine the relationship between relevant macroeconomic targets and the SAP's instruments as has been illustrated earlier in Chapter Three.

7.5.1 Estimated Growth Model

The aim here is to examine directly the effects that structural adjustment policies may have had on the economic growth in Jordan. In other words, the purpose is to estimate the growth model parameters, which reflect the significance of the parameter's associated tools. On the other hand, the coefficient of the dummy variable will indicate whether the program has any significant effect on growth. Moreover, to capture the effects of the external circumstances surrounding the adjustment process in Jordan we will be looking at the workers' remittances coefficient. Our economic growth model may be presented as:

$$\Delta RGDP = a_0 + a_1 \Delta dc + a_2 \Delta bd + a_3 \Delta ex + a_4 \Delta int + a_5 \Delta wr + a_6 d + a_7 ecm_{t-1} + e_t$$

Where, d represents the SAPs dummy and ecm is the residual derived from the Error Correction Mechanism through applying cointegration. As explained in Chapter Three dc , bd , ex and int are the typical SAP tools, expressed in real terms - the parameters to be estimated. All variables - ecm and d excepted - are expressed in differenced form and natural logarithm.

The evidence for the impact of the SAPs on the economic growth is shown in Table (7.3). The T-values are shown in parentheses below the estimated coefficients. General examinations of these findings suggest that the estimated R^2 -adjusted value indicates a reasonably good fit for the estimated equations, considering that our model being in differenced form. The D.W statistic indicates that the model does not reveal any problem of serial correlation.

According to the estimation, some of the program's tools coefficients appear to be statistically significant at the 1 per cent and 5 per cent significance levels. The estimated coefficient of domestic credit appears to be highly significant at the 1 level with a positive sign, which suggests a reduction in domestic credit is associated with adverse effects on the level of economic activity. In other words, the IMF stabilisation policy, which calls for a reduction in domestic credit by the central bank or the banking system, and on the credit extended to the public sector, appears to have a deflationary effect on Jordan's domestic output.

As for real interest rates, the statistical results support the SAPs, where the estimates for real interest rates are statistically significant at the 5 per cent level with a positive sign, suggesting that there is a positive relationship with the degree of development of the financial sector including freer interest rates and economic performance. It can be inferred that raising the domestic real interest rate can stimulate domestic saving and hence promote domestic investment. To capture the external effects of the circumstances surrounding the adjustment program the estimated coefficient of workers' remittances have a positive sign, however, it is statistically insignificant.

As to whether the adjustment programs have had any effect on the economic growth, the estimated coefficient of the dummy variable shows that, although it has a positive sign, the SAPs have had no statistically significant effect on the economic growth. Both budget deficits and exchange rates or devaluation have had an insignificant effect on the economic growth. Finally the estimated coefficient of *ecm* is

statistically significant at 5 per cent level and with a negative sign. This suggests the validity of a long-run equilibrium relationship among the variables in the long-run equation.

The findings for the growth model indicate that although the dummy variable has a positive sign, it is statistically insignificant. On the other hand, it seems that only domestic credit growth and interest rates have significant effects the economic growth. However, the estimated coefficient of the domestic credit is higher than the real interest rates coefficient, thus one might suspect the deflationary impact of the program on the economic growth.

7.5.2 Estimated Reserve Model

Enhancing Jordan's international reserves is one of the ultimate important targets of the SAPs. Thus, by estimating the reserve model our aim is to find out the effect of the programs as well as the attached policies in improving the country official reserves. Based on equation (5) in Chapter Three, the reserve model for estimation purposes may be shown as follows:

$$\Delta RES = \beta_0 + \beta_1 \Delta ldc + \beta_2 \Delta lbd + \beta_3 \Delta lex + \beta_4 \Delta lint + \beta_5 \Delta lwr + \beta_6 d + \beta_7 ecm_{t-1} + e_t$$

Here, *RES* is Jordan's international reserves; *d*, *ecm* and *wr* represent the program dummy, the residual and the workers' remittances, respectively. As explained in the

growth model *dc*, *bd* , *int* and *ex* are the typical tools of the SAPs. All program's tools are expressed in real terms and differenced logarithm form.

The estimated results, given in Table (7.4), generally comply with the theory and offer a reasonable fit based on R^2 -adjusted. Also the results do not reveal any problem of serial correlation as D.W statistic indicates. First of all, like the growth model, real interest rates and domestic credit are highly statistically significant at the 1 per cent level and both estimates have the correct sign. These findings support the IMF position that excessive domestic demand produced by an expansion of domestic credit reduces the level of international reserve through the purchase of foreign goods as was explained in Chapter Three.

As for real interest rates, the statistical results are again supportive of the SAPs. The estimates for real interest rates are significant at the 1 per cent level and have a positive sign. Therefore, it can be inferred that raising the domestic real interest rate can stimulate domestic saving and hence discouraging capital outflow and, consequently, would alleviate pressure on the country foreign reserves while enhancing capital inflow. These results show that a 1-percentage increase in domestic real interest rates would cause, *ceteris paribus*, the international reserves to improve by 0.19 percent. Both the fiscal deficit and real exchange rates appear to be insignificant in the reserve model.

With respect to Jordanian workers' remittances, unsurprisingly the estimated coefficient appears to be statistically significant with high parameter 0.53, which implies that an increase of 1 percent in workers' remittances sent home from abroad would increase, *ceteris paribus*, the country's international reserves by 0.53 percent. This might also explain why the SAP emphasised on the importance of the workers' remittances in the economy of Jordan in the early stage of SAP.

Finally, as to whether the introduction of SAPs in 1992 is associated with improvements in the international reserves of the country, the evidence indicates that the coefficient of the dummy variable is statistically significant at the 5 per cent level which suggests that the SAPs have had a positive impact on the country's international reserves. The estimated residual derived from the cointegration procedure *ecm* has a negative sign, but it is statistically insignificant. On the basis of these results, we conclude that both program and non-program factors improve the international reserves in Jordan.

7.5.3 Estimated Inflation Model

To demonstrate whether the SAP has impact on the inflation rates in Jordan over the programs period we attempt to estimate an inflation model as function of the program policies and dummy variable to take account of the post SAP period, based on the inflation model expressed in Chapter Three. The inflation model as in equation (4) can be rewritten as:

$$\Delta CPI = \delta_0 + \delta_1 \Delta dc + \delta_2 \Delta bd + \delta_3 \Delta ex + \delta_4 \Delta int + \delta_5 \Delta wr + \delta_6 \Delta ms + \delta_7 d + \delta_8 ecm_{t-1} + e_t$$

Where ΔCPI represents the inflation rate, d is the dummy variable ecm is the estimated residual derived from the cointegration procedure and Ms is the money supply (M2). The other variables represent the main policies implemented under SAPs as explained earlier.

The estimated results given in Table (7.5) offer a reasonable fit based on R^2 -adjusted. The D.W statistic 1.9 indicates that the model does not reveal any problem of serial correlation. All SAP instruments appear to be significant. The fiscal deficit is statistically significant with a positive sign. This implies that as the government's fiscal deficit diminishes the rate of inflation would decrease, *ceteris paribus*. A 1-percentage reduction in the government deficit would decrease the rate of inflation by a 0.11 per cent. As for the exchange rate, the results appear to prove that devaluation of the Jordanian dinner against US\$ has an inflationary effect on the economy.

With regard to money supply, the results are again supportive of the IMF programs. The estimates for the Ms are statistically significant at the 5 per cent level and the estimate coefficient has a positive sign, which implies that the rate of inflation is sensitive to the money supply growth rate. A 1-percentage increase in the money supply would increase the inflation rate by 0.10 per cent. Interestingly, the interest

rate variable shows a positive coefficient in the model. A similar result has been found in Rother (2000: 16-17). A potential explanation lies in the nature of this variable, which is set administratively in the period before the program. Even in the period after the implementation of the program the interest rate was not fully freely set. Turning to the external factor (Wr), the findings indicate that the estimate is positive and statistically insignificant.

The answer to the question whether the implementation of SAPs since 1992 has affected the inflation rate, comes from the coefficient of the dummy variable. Although it is negative (nearly equal zero), it is statistically insignificant. However, according to our results, fiscal deficit, money supply and exchange rate are the main factors affect the inflation rate in Jordan, Table (7.5). Consequently, to further our investigations, we re-estimate the inflation model, taking into account only the above variables and the dummy variable as well. The results unfortunately do not differ from the previous model, where the dummy variable remain insignificant, but with higher coefficient 0.06. Interestingly, not only the coefficient of the dummy variable increased, but also all coefficients increased and remained significant with 0.19, 0.25 and 0.09 for budgeted deficit, money supply and exchange rate, respectively.

From what has been illustrated, although some of the SAP instruments have a favourable impact on the inflation rate, the introduction of SAPs in 1992 seems to have no effect as suggested by the coefficient of the dummy variable in both models.

7.5.4 Estimated Imports Model

As we discussed earlier, the Jordanian economy has been undergoing substantial changes since 1992. Reform efforts under SAPs have been conditional and strong. Almost all areas of the economy have been opened to both domestic and foreign private investment, import-licensing restrictions on intermediates and capital goods have been mostly eliminated, quantitative restrictions on imports have been replaced by tariffs, and tariffs have been also reduced in stages. The maximum tariff rate, in some products, was reduced from 318 per cent in 1989 to a maximum of 30 per cent in 2000. In the light of the developments above, the reason behind estimating Jordanian aggregate imports is to investigate the effect of Jordan's import liberalisation policy under the SAPs. The imports demand model could be written as follows:

$$\Delta IMP = \lambda_0 + \lambda_1 \Delta y + \lambda_2 \Delta pm + \lambda_3 \Delta wr + \lambda_4 d + \lambda_5 ecm_{t-1} + e_t$$

Where, *IMP* is the real value of imports, *y* is the real level of income, and *pm* is the relative price. Thus, the parameters λ represent the elasticities relating factors to imports, *d* and *ecm* are the program dummy and the residual derived from the cointegration procedure.

The results in the imports model, Table (7.6), are statistically significant at the 1 and 5 per cent significance levels, with the exception of the coefficient of the dummy variable, which appears to be insignificant. The signs of the coefficients are as

expected and the estimated model explains more than 60 percent of the variations in imports demand, the results also, show that the model does not reveal any problem of serial correlation.

The aggregate import demand is found to be price-inelastic, the short-run price elasticity estimate equal -0.29. The real income elasticity is 0.68 suggesting that the demand for imports also is inelastic with respect to real income. The estimated coefficient of the error correction term -0.51 is statistically significant at the 1 percent level with a negative sign. This suggests the validity of the long-run equilibrium relationship among the variables in the Jordan's imports model since it is derived from the long-run cointegrating relationship.

With regard to the remittances of Jordan nationals working abroad, as expected the results show they are significant as important sources to cover the country's needs for imports. Finally, the dummy variable capturing the effect of the SAPs, particularly import liberalisation on imports volume, although has a negative sign; it emerged as insignificant determinants of the import demand for Jordan.

From the above estimated model the aggregate import volume is found to be both price and income inelastic. Therefore, one can argue that the value of the short-run elasticities implies that imports are regarded as necessary goods in Jordan. In fact looking at the Jordanian imports distribution, according to economic function,

reveals that raw materials and intermediate goods account for more than 50 per cent of total Jordan's imports [CBJ, 2000].

7.5.5 Estimated Exports Model

Having examined the effect of SAPs on Jordan's imports demand, our empirical analysis here will investigate the impact of SAPs and trade liberalisation on Jordan's exports demand at the aggregate level. Exports in Jordan are generally not subject to taxes and there are no explicit restrictions on exports from Jordan. However, to overcome the hidden bias against exports, a number of initiatives have been undertaken since 1989 to promote exports under SAPs.

Measures to streamline administrative procedures were implemented, the requirements for admission of intermediate inputs were eased and the arrangements for export finance were rationalised, as were incentives for investments in general. The government upgraded the existing export-promotion institution the -Jordan Commercial Centre Corporation (JCCC) - giving it primary responsibility for exports and investment promotion which resulted in the signing of several trade agreements to promote exports as summarised in Table (7.8).

To test for the presence or absence of trade liberalisation under the SAPs on Jordan's exports volume we estimated an exports model where a set of explanatory variables determines the exports demand. These variables are the level of world income and

the relative price. Based on equation (7) in Chapter Three, our exports model may be presented as:

$$\Delta EXP = \partial_0 + \partial_1 \Delta wg + \partial_2 \Delta ep + \partial_3 d + \partial_4 ecm_{t-1} + e_t$$

Here *EXP* is the total real exports, *wg* and *ep* are the world income (the growth rate of the world income) and the exports relative price, respectively; *d*, *ecm*, and *e_t* are the program dummy, the residual and the error term, respectively. The exports demand estimation is shown in Table (7.7). Considering that our exports function being in differenced form, one should argue that the estimated *R*²-adjusted values indicates a reasonably good fit for the estimated equations. The D.W statistic indicates that the model does not reveal any problem of serial correlation.

The empirical results show the positive and significant impact of the world income on exports demand. The income elasticity of exports is 0.14, which implies that a one per cent increase in the growth rate of world income increases the level of exports by 0.14 per cent. The interesting variable is the relative price variable, this has an expected negative impact and is statistically significant at the 5 per cent level. The price elasticity of exports demand is -0.43 which implying that the demand for Jordan's exports is found to be price inelastic. The estimated coefficient of the error correction term -0.22 which contains the long-run information since it is derived from the long run co-interacting relationships is statistically significant at less than the 1 per cent level.

Finally as to whether SAPs and mainly trade liberalisation implemented since 1992 have had an impact on Jordan's exports demand. The estimated coefficient of dummy variable shows a positive and significant impact of SAPs and trade liberalisation on the level of exports.

Now as far as SAPs instruments are concerned, it is possible to further our investigation to determine the validity of the devaluation of the JD as a policy measure to reduce the trade deficit problem. The question now is does devaluation improve the Jordanian trade balance? According to the SAPs, devaluation is an important macroeconomic policy recommended to reduce the trade deficit. Following our discussion in Chapter Three of the elasticity approach to BOP and the Marshall-Lerner condition, it is a worthwhile exercise to estimate the trade elasticities for Jordan as the exports and imports models permit.

Since the Marshall-Lerner condition is a long-run condition [Bahmani-Oskooee, 1998] a long-run imports and exports model were estimated. The traditional approach is one of estimating the size of import and export demand elasticities and determining whether their absolute values add up to more than unity. If they do, depreciation is said to improve the trade balance.

Table (7.9) provides estimated parameters that represent long-run elasticities along with their respective short-run elasticities. In the case of the exports model, the

estimated coefficients suggest that foreign economic activity elasticity carries a negative sign. However, the activity elasticity is still inelastic -0.26. The export price elasticity is elastic -1.07, which implies that high price elasticity, suggests that as the exports price decreases, Jordan will be in a position to boost its exports. Regarding the imports model, the long-run elasticities of real imports demand with respect to real income and relative price can be interpreted in a similar fashion. Briefly, real income elasticity carries the expected positive sign and is inelastic 0.71. The estimated relative price elasticity has a negative sign, and inelastic -0.48.

To draw our conclusion from the above exercise, it seems that the Marshall-Lerner condition is satisfied by our results. This condition indicates that for devaluation to be successful as a balance of payments adjustment mechanism the sum of exports price elasticity and the imports price elasticity must add up to more than unity. When applied to our results, the long-run Marshall-Lerner condition is satisfied 1.55 indicating that devaluation could improve the trade balance in the case of Jordan.

7.6 Conclusion

In this chapter, a time-series approach is used to assess the effects of the 1992-2001 Jordanian structural adjustment programs on the ultimate macroeconomic targets, the growth rate, the inflation rate and the international reserves. Imports and exports models were estimated for the purpose of assessing the SAPs impacts on the behaviour of Jordanian external trade and the existence of the Marshall-Lerner condition was also investigated.

To improve the degree of precision in our economic estimation of the models, we considered examining the time series properties of our variables using the unit root test and cointegration methods. Having determined the order of integration of variables by applying Augmented Dickey-Fuller (ADF) test, we applied the Johansen-Juselius method of cointegration in all our models. The empirical findings were one cointegration equation explaining the long-run relationship amongst variables within a given model. Finally, the chapter specified an Error Correction Model and estimated it using standard methods. In general, most of our models exhibited meaningful statistical significance.

The statistical results show that the structural adjustment programs, in general, are more successful in correcting external imbalances than they are in improving economic growth and curbing inflation. Indeed, the SAPs do not have much impact on the level of economic growth or inflation; however, they do improve the international reserves and exports performance.

As to the effectiveness of the program's tools, it is shown that domestic credit and interest rates have significant impact on the behaviour of key macroeconomic variables. Although the variation in these variables leads macroeconomic targets towards the desired goal it appears in some cases that they move the program objectives with unfavourable effects. The exchange rates appear to have no effect on the growth and the reserve models, while it appears to have significant effect on the inflation.

Further investigation of the long-run price elasticity of imports and exports revealed that the M-L condition is satisfied for Jordan, implying that devaluation of the JD against US\$ will have favourable long-run effect on the country's trade balance. The budget deficit comes at the end of the list in terms of its effectiveness, while it found to be significant only in the inflation model.⁴

The dummy variables introduced to capture the effect of SAPs and trade liberalisation policies on both import and export demand, have emerged to indicate that while they show no effect of trade liberalisation policy on aggregate import demand in Jordan, trade liberalisation under SAP recommendations appears to have a significant effect in improving Jordanian exports. Practically, this result necessitates the importance of encouraging the diversification of exports and their market accessibility to minimise external shock effects on exports and thus widening the trade deficit.

The results also show that the restrictive monetary policies have an adverse effect on the economic growth. However, as policy implication, these results necessitate careful use of this policy through orientating domestic credits towards income-generating projects at the expense of those for consumption purposes, in order to accommodate between keeping up the external performance and accelerating economic growth.

Although there was no significant evidence that SAPs reduces the inflation rates, the results show the effectiveness of the reduction in money supply growth in curbing the inflation rates, which indicates that inflation in Jordan might be a monetary phenomenon following the monetarist view. However, it was shown that the actual inflation rate in Jordan was less than the program expectations (as in Chapter Six). Perhaps this is due to the excessive use of the monetary restrain mechanisms followed by the program or it is an indication of the deflationary nature of the SAPs as whole.

The most striking development from the implementation of SAPs reform is the sharp increase in international reserves which on one hand, accords with the monetary approach of the program and on the other hand, corroborates previous results on the impact of SAPs, showing that the latter programs are more successful in correcting external imbalances than they are in achieving economic growth. Finally, in relation to the external factor, it emerged that workers' remittances have a significant effects on of both the Jordanian total imports and the international reserves.

Table (7.1)
ADF Unit-Roots Test for Stationarity

Variables	Level (L)	First Difference (Δ)	Conclusion
RGDP	-2.158	-3.664	I(1)**
DC	-1.487	-5.266	I(1)***
BD	-3.652	-8.278	I(1)***
EX	-2.926	-3.534	I(1)**
INT	-3.240	-5.779	I(1)***
WR	-3.709	-3.559	I(1)**
RES	-2.794	-5.299	I(0)**
MS	-2.342	-3.149	I(1)*
INF	-3.240	-5.802	I(1)***
IMP	-2.194	-4.742	I(1)**
PM	-3.931	-4.591	I(1)***
WG	-4.161	-4.595	I(1)***
EP	-6.080	-4.516	I(0)***
EXP	-2.147	-5.011	I(1)***

Note: Unit root tests were performed using Eviews (version .4)

- *** Significance at 1 %
- ** Significance at 5 %
- * Significance at 10 %

Table (7.2, a)
Johansen Cointegration Test for (RGDP)

TRACE TEST					MAXIMAL EINGENVALUE TEST				
Null (Ho)	Alter (H1)	Statistic	Critical Value (95 %)	Critical Value (1%)	Null (Ho)	Alter (H1)	Statistic	Critical Value (95 %)	Critical Value (1%)
$r = 0$	$r \geq 1$	163	94.15	103.18	$r = 0$	$r = 0$	68.16	39.37	45.10
$r \leq 1$	$r \geq 2$	95.0	68.52	76.07	$r \leq 1$	$r = 1$	33.94	33.46	38.77
$r \leq 2$	$r \geq 2$	61.14	47.21	54.46	$r \leq 2$	$r = 2$	27.63	27.07	32.24
$r \leq 3$	$r \geq 3$	34.51	29.68	35.65	$r \leq 3$	$r = 3$	19.05	20.97	25.52
$r \leq 4$	$r \geq 4$	15.45	15.41	20.04	$r \leq 4$	$r = 4$	14.70	14.07	18.63
$r \leq 5$	$r \geq 5$	0.75	3.76	6.65	$r \leq 5$	$r = 5$	0.75	3.76	6.65

Notes: (1) The test was performed using Eviews (version .4)
(2) **r** stands for the number of cointegrating vectors.

Table (7.2, b)
Johansen Cointegration Test (RES)

TRACE TEST					MAXIMAL EINGENVALUE TEST				
Null (Ho)	Alter (H1)	Statistic	Critical Value (95 %)	Critical Value (1%)	Null (Ho)	Alter (H1)	Statistic	Critical Value (95 %)	Critical Value (1%)
$r = 0$	$r \geq 1$	174.75	94.15	103.18	$r = 0$	$r = 0$	62.07	39.37	45.10
$r \leq 1$	$r \geq 2$	112.68	68.52	76.07	$r \leq 1$	$r = 1$	45.35	33.46	38.77
$r \leq 2$	$r \geq 2$	67.32	47.21	54.46	$r \leq 2$	$r = 2$	35.63	27.07	32.24
$r \leq 3$	$r \geq 3$	31.69	29.68	35.65	$r \leq 3$	$r = 3$	19.35	20.97	25.52
$r \leq 4$	$r \geq 4$	12.34	15.41	20.04	$r \leq 4$	$r = 4$	11.19	14.07	18.63
$r \leq 5$	$r \geq 5$	1.149	3.76	6.65	$r \leq 5$	$r = 5$	1.14	3.76	6.65

Notes: (1) The test was performed using Eviews (version .4)
(2) **r** stands for the number of cointegrating vectors

Table (7.2, c)
Johansen Cointegration Test for (INF)

TRACE TEST					MAXIMAL EINGENVALUE TEST				
Null (Ho)	Altern (H1)	Statistic	Critical Value (95 %)	Critical Value (1%)	Null (Ho)	Altern (H1)	Statistic	Critical Value (95 %)	Critical Value (1%)
$r = 0$	$r \geq 1$	212.52	124.24	133.57	$r = 0$	$r = 0$	82.52	45.28	51.57
$r \leq 1$	$r \geq 2$	129.99	94.15	103.18	$r \leq 1$	$r = 1$	42.91	39.37	45.10
$r \leq 2$	$r \geq 2$	87.08	68.52	76.07	$r \leq 2$	$r = 2$	40.03	33.46	38.77
$r \leq 3$	$r \geq 3$	47.05	47.21	54.46	$r \leq 3$	$r = 3$	31.12	27.07	32.24
$r \leq 4$	$r \geq 4$	15.92	29.68	35.65	$r \leq 4$	$r = 4$	9.94	20.97	25.52
$r \leq 5$	$r \geq 5$	5.97	15.41	20.04	$r \leq 5$	$r = 5$	5.86	14.07	18.65

Notes: (1) The test was performed using Eviews (version .4)
 (2) **r** stands for the number of cointegrating vectors

Table (7.2, d)
Johansen Cointegration Test for (IMP)

TRACE TEST					MAXIMAL EINGENVALUE TEST				
Null (Ho)	Altern (H1)	Statistic	Critical Value (95 %)	Critical Value (1%)	Null (Ho)	Altern. (H1)	Statistic	Critical Value (95 %)	Critical Value (1%)
$r = 0$	$r \geq 1$	53.03	47.21	54.46	$r = 0$	$r = 0$	25.03	27.07	32.24
$r \leq 1$	$r \geq 2$	28.00	29.68	35.65	$r \leq 1$	$r = 1$	12.02	20.97	25.52
$r \leq 2$	$r \geq 2$	15.98	15.41	20.04	$r \leq 2$	$r = 2$	9.27	14.07	18.63
$r \leq 3$	$r \geq 3$	6.71	3.76	6.65	$r \leq 3$	$r = 3$	6.71	3.76	6.65

Notes: (1) The test was performed using Eviews (version .4)
 (2) **r** stands for the number of cointegrating vectors

Table (7.2, e)
Johansen Cointegration Test for (EXP)

TRACE TEST					MAXIMAL EINGENVALUE TEST				
Null (Ho)	Altern (H1)	Statistic	Critical Value (95 %)	Critical Value (1%)	Null (Ho)	Altern. (H1)	Statistic	Critical Value (95 %)	Critical Value (1%)
r = 0	r ≥1	54.44	29.68	35.65	r = 0	r = 0	28.45	20.97	25.52
r ≤ 1	r ≥ 2	25.98	15.41	20.04	r ≤ 1	r = 1	17.94	14.07	18.63
r ≤ 2	r ≥ 2	8.04	3.76	6.65	r ≤ 2	r = 2	8.04	3.76	6.65

Notes: (1) The test was performed using Eviews (version .4)
(2) **r** stands for the number of cointegrating vectors

Table (7.3)
Estimated Growth Model

$\Delta lRGDP = a_0 + a_1\Delta ldc + a_2\Delta lbd + a_3\Delta lex + a_4\Delta l\text{int} + a_5\Delta lwr + \alpha_6d + a_7ecm_{t-}$								
Parameters	α_0	α_1^{***}	α_2	α_3	α_4^{**}	α_5	α_6	α_7^{**}
	-0.00	0.29	-0.07	0.11	0.01	0.05	0.01	-0.46
T-value	(-0. 20)	(2. 97)	(-0. 34)	(0. 33)	(2. 41)	(1. 23)	(0. 93)	(-2. 68)
R^2 -adj	= 0.51					*** 1% Significance		
F-stat	= 6.78					** 5% Significance		
D.W	= 1.7					* 10% Significance		

Notes: (i) The estimation was performed using Eviews (version .4).
(ii) The correlation matrix (not reported here) reveals that the explanatory variables constitute near-orthogonal regressions and therefore, Multicollinearity is not a problem.

Table (7.4)
Estimated Reserve Model

$\Delta IRES = \beta_0 + \beta_1 \Delta ldc + \beta_2 \Delta lbd + \beta_3 \Delta lex + \beta_4 \Delta l int + \beta_5 \Delta lwr + \beta_6 d + \beta_7 ecm_{t-1} + e_t$								
Parameters	β_0	β_1^{***}	β_2	β_3	β_4^{***}	β_5^{***}	β_6^{**}	β_7
	9.90	-0.76	-0.56	-1.64	0.19	0.53	0.58	-0.08
T-value	(9.49)	(-4.09)	(-0.39)	(-0.93)	(3.78)	(1.23)	(2.03)	(-0.51)
R^2 -adj = 0.74						*** 1% Significance		
F-stat = 15.30						** 5% Significance		
D.W = 1.9						* 10% Significance		

Notes: (i) The estimation was performed using Eviews (version .4).
(ii) The correlation matrix (not reported here) reveals that the explanatory variables constitute near-orthogonal regressions and therefore, Multicollinearity is not a problem.

Table (7.5)
Estimated Inflation Model

$\Delta CPI(inf) = \delta_0 + \delta_1 \Delta lbd + \delta_2 \Delta lex + \delta_3 \Delta l int + \delta_4 \Delta lwr + \delta_5 \Delta lms + \delta_6 d + \delta_7 ecm_{t-1} + e_t$								
Parameters	δ_0	δ_1^*	δ_2^{**}	δ_3^{**}	δ_4	δ_5^{**}	δ_6	δ_7
	0.01	0.11	0.08	0.01	0.02	0.09	-0.00	0.30
T-value	(1.97)	(1.85)	(2.04)	(2.66)	(1.56)	(2.23)	(-0.97)	(0.28)
R^2 -adj = 0.74						*** 1% Significance		
F-stat = 7.36						** 5% Significance		
D.W = 1.9						* 10% Significance		

Notes: (i) The estimation was performed using Eviews (version .4)
(ii) The correlation matrix (not reported here) reveals that there was high correlation between DC and Ms. Therefore, we eliminate the DC from the model and re-estimated.

Table (7.6)
Estimated Imports Model

$\Delta IMP = \lambda_0 + \lambda_1 \Delta y + \lambda_2 \Delta pm + \lambda_3 \Delta wr + \lambda_4 d + \lambda_5 ec m_{t-1} + e_t$						
Parameters	λ_0	λ_1^{**}	λ_2^{**}	λ_3^{***}	λ_4	λ_5^{***}
	0.00	0.68	-0.29	0.20	-0.01	-0.51
T-value	(0. 17)	(2. 74)	(-1. 90)	(3.67)	(-0. 32)	(-3. 18)
R^2 -adj = 0.62				*** 1% Significance		
F-stat = 10.50				** 5% Significance		
D.W = 2.1				* 10% Significance		

Notes: (i) The estimation was performed using Eviews (version .4)
(ii) The correlation matrix (not reported here) reveals that the explanatory variables constitute near-orthogonal regressions and therefore, Multicollinearity is not a problem.

Table (7.7)
Estimated Exports Model

$\Delta EXP = \partial_0 + \partial_1 \Delta wg + \partial_2 \Delta ep + \partial_3 d + \partial_4 ec m_{t-1} + e_t$					
Parameters	∂_0^*	∂_1^{***}	∂_2^{**}	∂_3^*	∂_4^{***}
	0.05	0.14	-0.43	0.12	-0.22
T-value	(1. 79)	(4.51)	(-2.45)	(1. 92)	(-3. 90)
R^2 - adj = 0.56				*** 1% Significance	
F-stat = 9.7				** 5% Significance	
D.W = 1.9				* 10% Significance	

Notes: (i) The estimation was performed using Eviews (version .4)
(ii) The correlation matrix (not reported here) reveals that the explanatory variables constitute near-orthogonal regressions and therefore, Multicollinearity is not a problem.

Table (7.8)

The Agreements Signed Over the Years 1997-2000

Agreements	Date Signed	Implementation	Comments
The Arab free trade agreement	19/2/1997	1/1/1998	Free trade with the Arab Countries throughout the 10-year duration of the agreement
The Jordan-USA bilateral investment treaty	1/7/1997	1/7/1997	Encouragement and reciprocal protection of investments and economic co-operation.
The Euro-Mediterranean agreement	1/11/1997	1/1/2000	Free trade zone by 2010 and strengthen joint co-operation between EU members and the Mediterranean countries.
The agreement of establishing the Qualified Industrial Zones (QIZs) in Jordan	16/11/1997	16/11/1997	Free trade with the USA within the QIZ (one- way trade).
The Jordanian European joint partnership	24/11/1997	1/1/1999	Free trade with the European Union throughout the 12-year duration of the agreement.
The World Trade Organisation (WTO)	17/12/1999	11/4/2000	This agreement permits retaining a maximum of 20%-30% Customs Fees throughout the 10-year duration of the agreement.
The Free Trade Agreement (FTA) with the USA		30/9/2001	Free trade with the USA throughout the 10-year duration of the agreement.

Table (7.9)
Summary of Short-Run and Long-Run Elasticities

	Variable	Short-run elasticities	Long-run elasticities
Export demand	Relative price	-0.43	-1.07
	Real income	0.14	-0.26
Import demand	Relative price	-0.29	-0.48
	Real income	0.68	0.71
<i>Marshall-Lerner Condition</i>		(0.73)	(1.55)

Endnotes

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- ¹ The Granger Representation theorem states, "If two variables y and x are cointegrated, then the relationship between the two can be expressed as (ECM)". See, Gujarati (2003: 825).
- ² For more details regarding to the advantages of using the ECM, see: (i) Harris and Sollies (2003: 25-39) (ii) Clarke, Norpoth and Whiteley (1998: 127-155).
- ³ The dummy variables are constructed so that they will take zero values for the period prior to 1992 and unit values for the post 1992 period.
- ⁴ According to Khan and Knight (1985, 12) the effects of fiscal policy (deficit) "is difficult to establish empirically because of the linkage between fiscal policy and monetary policy, which is generally much tighter in developing countries... this is because there is a close correspondence between the fiscal deficit and changes in the supply of domestic credit. ... as such, in models that include the rate of domestic expansion, empirical test tend to suggest that fiscal variables have only a relatively modest independent role.

CHAPTER EIGHT

CONCLUSIONS AND FINDINGS

This study is essentially based on an evaluation of the effectiveness of structural adjustment programs on the macroeconomic performance of Jordan. The previous chapters provide the theoretical background of SAPs, methodologies of the program's evaluation and overall evaluation of structural adjustment programs using different approaches. This final chapter covers the main research conclusions, recommendations and contributions. Finally, points for future research will be outlined in the last section.

8.1 Summary and Conclusions

In this study, attempts have been made to assess the effects of SAPs on the main macroeconomic targets of these programs. To do so, the research has examined the main features of the Jordanian economy and the origins of the economic crisis in the late 1980s offered in Chapter Two. The major characteristics of the Jordanian economy were identified as follows: Firstly, Jordan's economy represents a small open economy intricately tied up with the external world, particularly with neighboring Arab countries. Secondly, Jordan is a semi-rentier economy. Consequently, these main features made Jordan's economy extremely vulnerable to external economic and political shocks, which have been highlighted in many ways throughout the last five decades of Jordanian history.

The onset of the economic crisis in Jordan was seen as a reflection of both past domestic policy mistakes or mismanagement and external shocks. The consequence was unsound macroeconomic performance, where the external debt was twice of the GDP, the inflation rate registered 25 per cent, the budget deficit 22.6 per cent of the GDP and a negative growth rate of almost 17 per cent in 1988. To overcome these imbalances, the Jordanian government responded, as a last resort, with stabilization and structural adjustment programs agreed with the IMF and World Bank.

Both theoretical and empirical aspects of SAPs were discussed, with special attention paid to the objectives and main instruments of SAPs. It was agreed that the need for macroeconomic adjustment essentially arises when a country has fundamental imbalances between aggregate demand and aggregate supply. These imbalances also, appear in the macroeconomic level as an overvaluation of the exchange rate, high inflation rates, widening external deficits and high levels of debt and deterioration of economic growth. Consequently, the fundamental objective of SAPs is to meet the principle macroeconomic objectives.

To achieve these objectives, the SAPs combine stabilization policy, typically including monetary and fiscal instruments, designed to adjust the aggregate level of demand to production. On the other hand, the SAPs contain structural policies aimed at increasing the efficiency of the economy through, privatization, liberalization and structural reforms. In this regard, it was concluded that although SAPs are based on the assumption that economic problems arise from mismanagement of the economic

polices of individual countries, Jordanian experience, however, proves that the problems faced by the country are related to both external and internal factors.

In order to assess the effects of SAP's instruments on the macroeconomic targets, and based on the main links between policy instruments and SAPs objectives; the study suggested the main features of the econometric model (objectives- instruments approach) for estimation purposes. Given the fact that only annual data, not quarterly, was available, an alternative was to run the analysis for the period 1972-2001 with a dummy variable included in all the models to take into account the introduction of SAPs. On the other hand, to reflect the nature of the Jordanian economy, the models included the Jordanian workers' remittances as external factor.

In order to evaluate the SAPs, it was essential to review and discuss the methodological issues related to the evaluation of SAPs. In this regard, Chapter Four concluded that evaluation of SAPs is not a straightforward task; it raises a number of difficult statistical and analytical problems. Although it was revealed that there is no ideal approach to assessing the SAPs, one should not stop evaluating these programs, but rather be more careful and objective in doing so.

Moreover, it was emerged that SAPs evaluation and outcomes are counterfactual issues. Consequently, a researcher should be also aware of the limitations of these approaches as well as in interpreting its outcomes. In this regards this study concluded that any effective assessment of the IMF and the World Bank programs

requires taking into account the internal and external economic and political environment surrounding the implication of SAPs. In general, it was found that the structural adjustment programs were associated with improvements in the external imbalances, but had an insignificant impact on growth rates and mixed effects on inflation.

As this study used different methodologies in attempting to evaluate the effect of SAPs in Jordan, it was difficult to draw clear conclusions regarding the effect of SAPs without summarizing the outcomes of the evaluation, see Appendix (iv). In summary, the statistical evidences available suggest that the structural adjustment programs have a positive impact on the international reserves and the exports. However, the findings also suggest that the programs do not have significant impact on the level of economic activity, the imports and the inflation rate. These finding, indeed, relatively corroborate previous results on the impact of SAPs, showing that the latter programs are more successful in correcting external imbalances and boosting international reserves than they are in curbing inflation and improving economic growth.

As to the effectiveness of the SAPs instruments, the results show that the changes in the domestic credit and the interest rates appear to have significant impacts on the behavior of key macroeconomic targets. Although the variations in these instruments lead macroeconomic targets towards the desired goal, however, it appears in some cases that it moves the program objectives with unfavorable effects. Investigation

into the price elasticity of imports and exports revealed that the M-L condition is satisfied for Jordan, implying that devaluation of the JD have favorable impact of the country's trade deficits.

Finally, although fiscal policy was one of the important tools of SAPs, the results, however, show that the budget deficit comes at the end of the list in terms of its effectiveness. In this regard, it appears that the government mismanaged its fiscal discipline where the increase in the revenues did not associated with appropriate reduction in the expenditures, particularly the current expenditures, making the fiscal discipline more difficult to control. It was found that Jordan's experience underestimated the potential benefits of reducing unproductive expenditure in order to achieve efficient fiscal adjustment

It is noteworthy that, despite the fact that this study has tried to isolate the effects of external factors on the performance of the Jordan economy under SAPs, however, several exogenous factors, which had nothing to do with SAPs, affected the performance of the economy during the program period 1989-2001, and thus made the task extremely difficult. In this regard it was emerged from this study that workers' remittances, as non-program factor, are a significant determinant of both the Jordanian total imports and the international reserves.

In attempting to draw general conclusion with regard to the Jordanian experience with SAPs, the study concluded that after reluctance and serious economic crisis,

Jordan finally committed itself to a program of comprehensive structural adjustment and market reforms. The policies implemented during the past decade have touched virtually each and every aspect of the national economy, fiscal and monetary policies, exchange rates, tax system, industry, agriculture, transport, international business cooperation, banking and financial markets, foreign trade and tariffs, administration and the public sector. What has been clear is that despite more than a decade of economic adjustment and market reform, apart from some macroeconomic achievements, the key factor in the Jordanian economy is still external outflow.

Indeed, there remains the unsettling fact that the response of private investment, or even the FDI, to the policy changes has been quite disappointing. Much of the theoretical and empirical evidence suggests that sustained economic growth and sound economic performance required not only stable macroeconomic policies, but also a human capital base and high-quality institutions. A number of recent empirical studies and even the World Bank publications, have highlighted the importance of institutional reforms in shaping economic performance, see for instance, World Bank (1993), Kaufmann, Kraay and Zoido-Lobaton (1999) and Acemoglu, Johnson and Robinson (2001).

As far as Jordan is concerned, what is clear is that the extensive programs of adjustment were necessary, but insufficient. There are real obstacles to the development of the private sector, investment and growth, which are the serious

institutional regulatory and political constraints that are basically incoherent with the free market.

Many recent studies and reports reviewing the transformation process in Jordan, see Carroll (2003), Joffe (2002) and Ryan (2002), stressed the importance of institutional reforms and identified the main institutional impediments, *inter alia*, and have reported that patronage and its concomitants are disincentives to economic efficiency, there was a failure to tackle a bloated and inefficient bureaucracy, foot-dragging on new legislation, high levels of corruption and cronyism have been the most obvious problems. These issues handicap the country and prevent it from achieving sustainable long-term growth. Finally, there is a lack of policy transparency, predictability and mistrust of the State. Joffe (2002: 20) points out that:

“... As Jordan starts the new millennium, the record of the last decade of the twentieth century does not suggest that the promises of political and social change and even economic changes that have been introduced have been met, on the contrary, little real progress has been made.”

From what has been outlined above, the general conclusion from the Jordanian experience is that: it is difficult to be optimistic in the country's ability to produce sustained long-term growth and prosperity without real and in-depth institutional and political reforms commensurate with the economic reforms as well as a peaceful Middle East.

8.2 The Contributions

The contributions of this study emerge from the point that it is the only study, to the author's knowledge, that deals with the evaluation of the Jordanian experience under structural adjustment programs. This study has made an attempt to offer some contributions in many ways as follows:

- (i) In attempting to gauge the effects of structural adjustment programs, this research makes interlace of different approaches, using before-after, target-actual and econometric modeling. On the other hand, this study demonstrated that detailed use of target-actual evaluation methodology, complemented with a before-after approach can yield helpful insights into the reliability of the programs criteria and help to understand the reasons behind the program outcomes.
- (ii) The study applied recent advances in time-series econometrics to SAPs evaluation and to the Jordanian macroeconomic data. In all cases we applied methods of testing for non-stationarity, co-integration. The findings of this exercise were supportive of co-integration application.
- (iii) In the light of the fact that most empirical studies concerned with SAPs's evaluation are on cross-country bases, it emerged that a SAP is only one of many macroeconomic shocks to the country undertaking SAPs. Indeed, external factors, economic, politic or even natural shocks will also affect the

country's ability (positively or negatively) to achieve the macroeconomic targets of the SAPs. Therefore, measures or assessment of these programs requires the undertaking of the evaluation exercise based on an individual country's experiences.

- (iv) Finally, this study extracts large number of macroeconomic indicators from the published raw data, which will be important source for other researchers.

8.3 The Recommendations

It was important for this study to come up with some suggestions, which may prove useful in improving the Jordanian economic performance, and to give some insight to other researchers. Accordingly this study recommends:

- (i) Sensible use of restrictive domestic credit expansion through orientating domestic credits towards income-generating projects at the expense of those for consumption purposes, in order to accommodate between keeping up external performance and accelerating economic growth.
- (ii) Increasing exports with an emphasis on the importance of encouraging the diversification of exports and their market accessibility.

- (iii) Reducing current expenditures, in this regard the study recommends establishing an expenditure-monitoring unit to make sure of the efficient use of public revenue and to monitor any waste or misspending.
- (iv) Adoption of a realistic and stable exchange rate and monetary policy, which would curb inflation and enhance economic growth.
- (v) Setting macroeconomic indicators unit to calculate, classify, unify and publish the macroeconomic data.
- (vi) To enhance the achievements and to address the shortages of the SAPs, reform efforts should continue and be accelerated through adopting national economic, social and political program. However, this national program should be the outcome of civil society partnership with the government.

8.4 Topics for Further Research

To give overall representation of Jordanian experience with SAPs, a number of areas remain of great importance for further research. These are mainly:

- (i) Assessment of the social impacts of SAPs, particularly on poverty, unemployment and inequality.
- (ii) The response of private sector to SAPs and market reforms.

- (iii) An up-to-date study of the evolution of external and internal debt under the SAPs.
- (iv) The sectoral effect of SAPs, mainly on agricultural and industrial sectors.
- (v) The role of institutional reform and socio-cultural changes in the reform process.
- (vi) Investigating the validity of the main hypothesis of SAPs in Jordan, in this regard, export-led growth, money demand satiability and saving increases.
- (vii) The role of the financial resources associated with the SAPs.

APPENDIX (i): Definitions of Variables Utilized in the Econometric Equations

All data are yearly for the period 1972-2001. The main sources of the data set are:

- (a) Central Bank of Jordan (CBJ), several Annual Reports and Monthly Bulletins.
- (b) International Financial Statistics (IFS), of the International Monetary Fund.

RGDP: Real GDP, nominal GDP is deflated by the domestic price level CPI (1995 = 100) to obtain real GDP. GDP from source (a) CPI from source (b)

DC: Domestic credit, we obtain real domestic credit by deflating nominal domestic credit to price level index CPI (1995 =100). All data come from source (b).

BD: Overall budget deficit, we obtain this measure by deflating nominal budget deficit {Total revenue –Total expenditure} to domestic price level CPI (1995 = 100) to obtain real budget deficit. Apart from CPI, all data come from source (b).

INT : Stands for real domestic interest rate (end of the period), which was obtained on the basis of the following equation ($INT = \text{Lint} - \text{Lp}$) where:

Lint : Natural logarithm of domestic interest rate.

LP : Natural logarithm of the consumer price index for Jordan. Note that all data are from source (b).

EX : Refers to the real exchange rate, which was derived on the basis of the following equation:

($EX = e. P/P^*$) where :

e : The nominal bilateral rate, expressed as the number of US\$ unit per JD unit.

P : The price level of the home country (1995 =100)

*P** : The price level in USA (1995 =100). All data are from source (b).

WR : Jordanian workers' remittances (nominal WR is deflated by the domestic price level CPI (1995 =100) to obtain real WR. From source (a).

RES : Refers to official reserve of foreign currencies. From source (a).

MS : Denotes to money supply (M2). From source (a).

INF : Stands for inflation rate, measured by percentage change of CPI (1995 =100)
From source (b).

EXP : Exports volume, (nominal exports are deflated by export price index (1995 = 100) to obtain real export. EXP from source (a), CPI from source (b).

IMP : Imports volume, (nominal imports are deflated by import price index (1995 = 100) to obtain real imports. IMP from source (a). CPI from source (b).

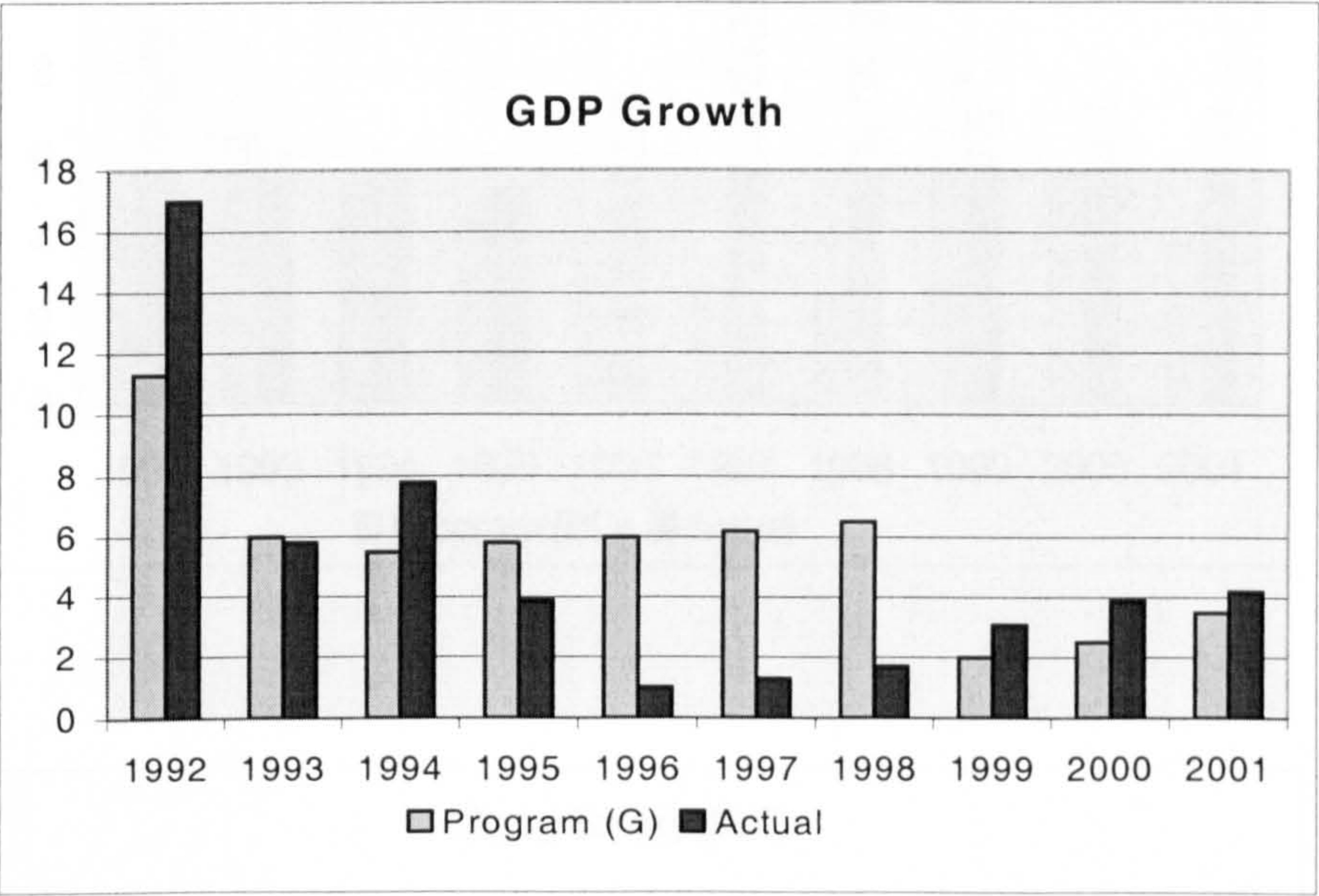
PM : Refers to the Import relative price (The ratio of the import price index (1995 =100) to the domestic price index (1995 =100). All data are from source (b)

EP : Denotes to exports relative price (The ratio of the exports price index (1995 =100) to the World price index (PW) (1995 =100). All data are from source (b)

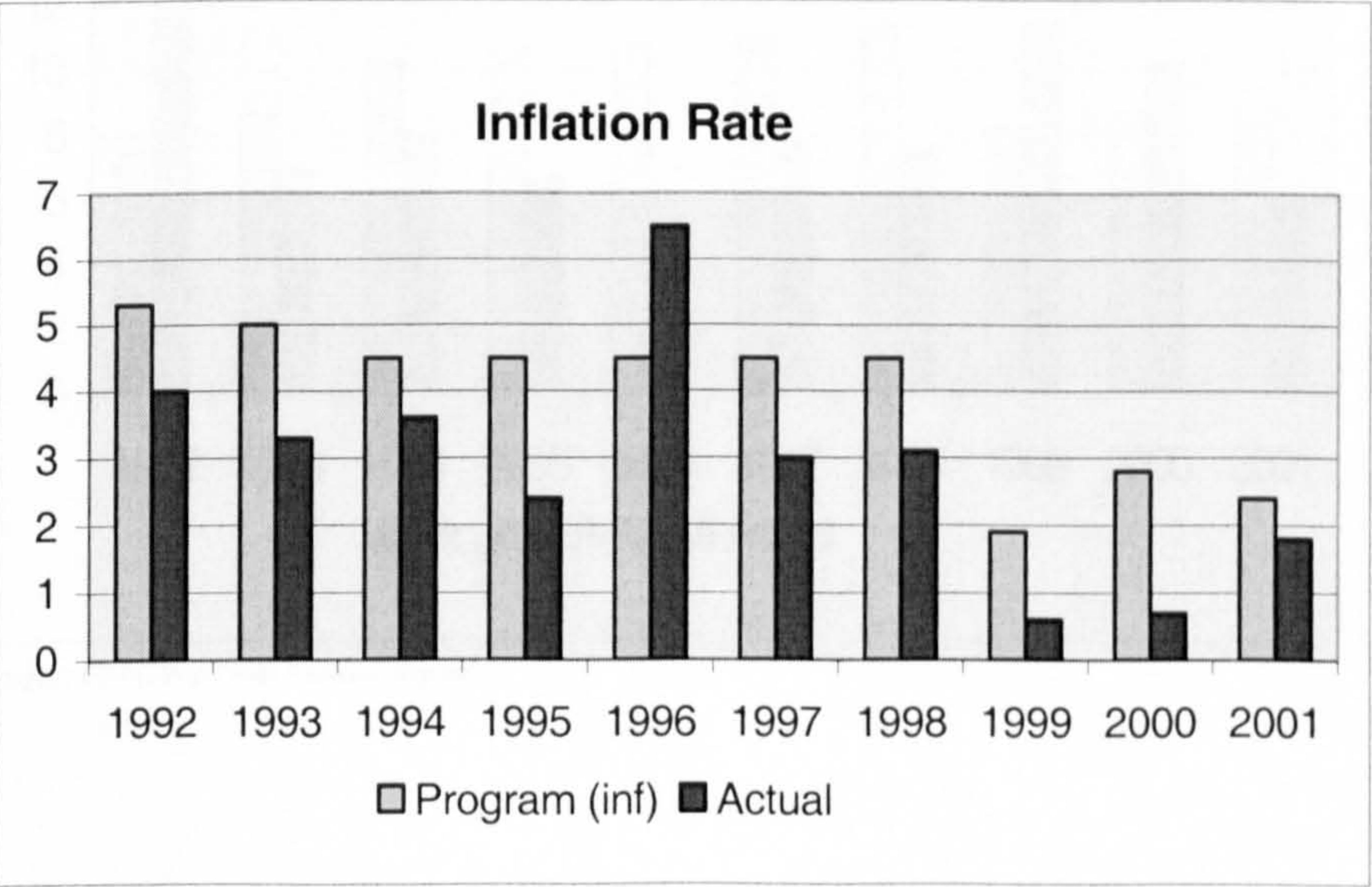
WG : Growth rate of World income. From source (b)

PW : World Price Index (1995 =100). From source (b)

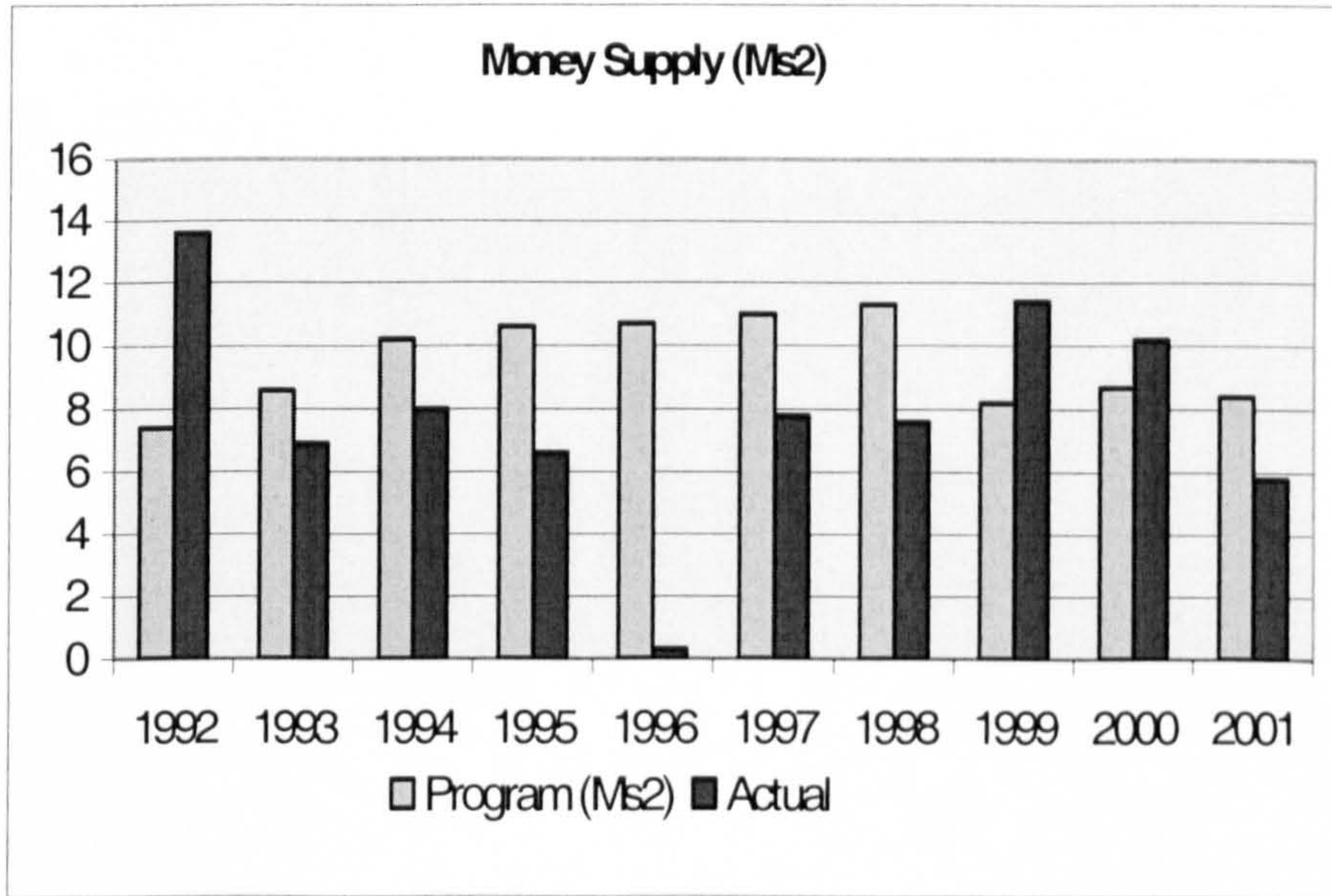
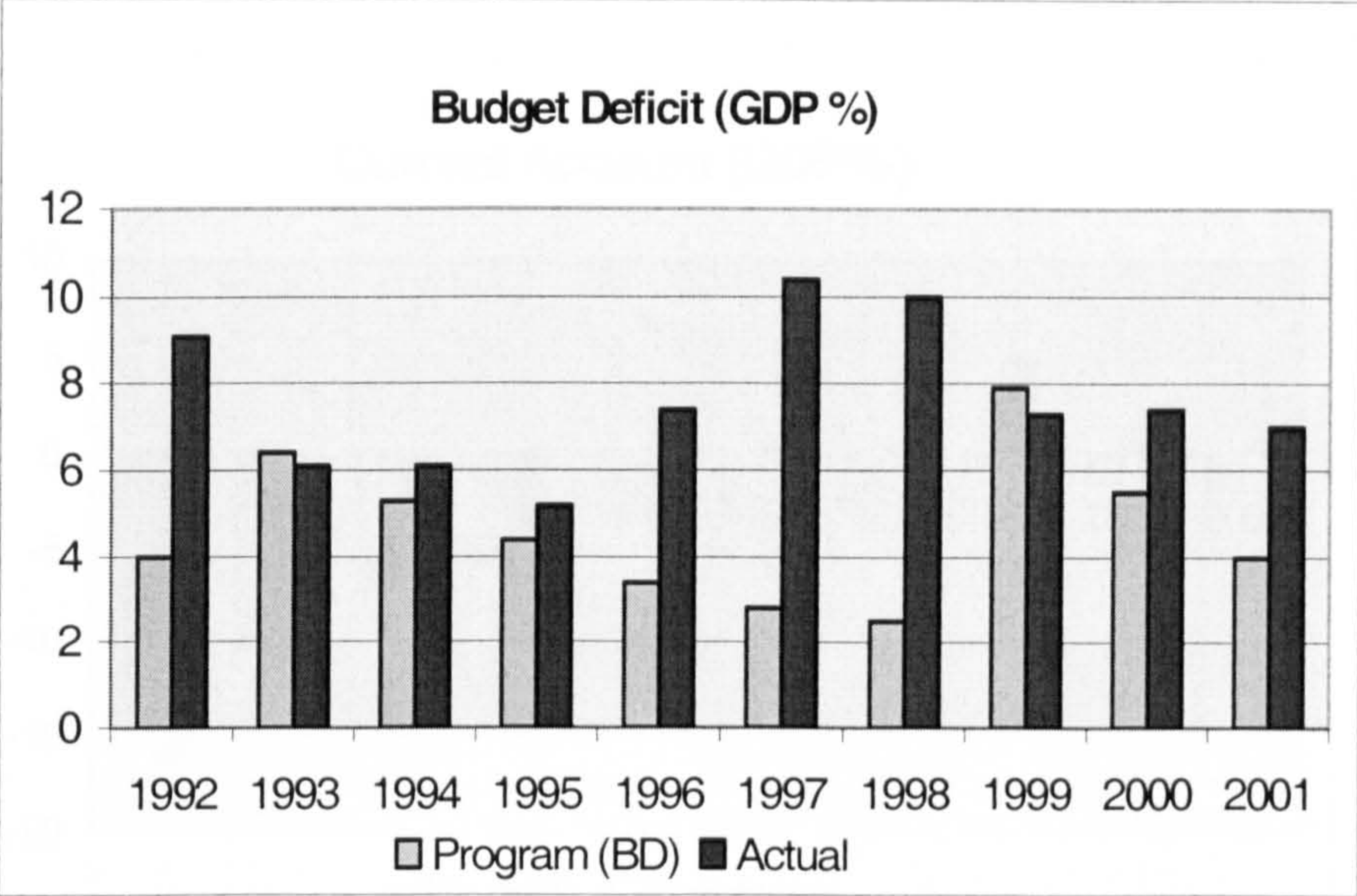
APPENDIX (ii): The Actual Macroeconomic Performance Compared with the program Targets (1992-2001)



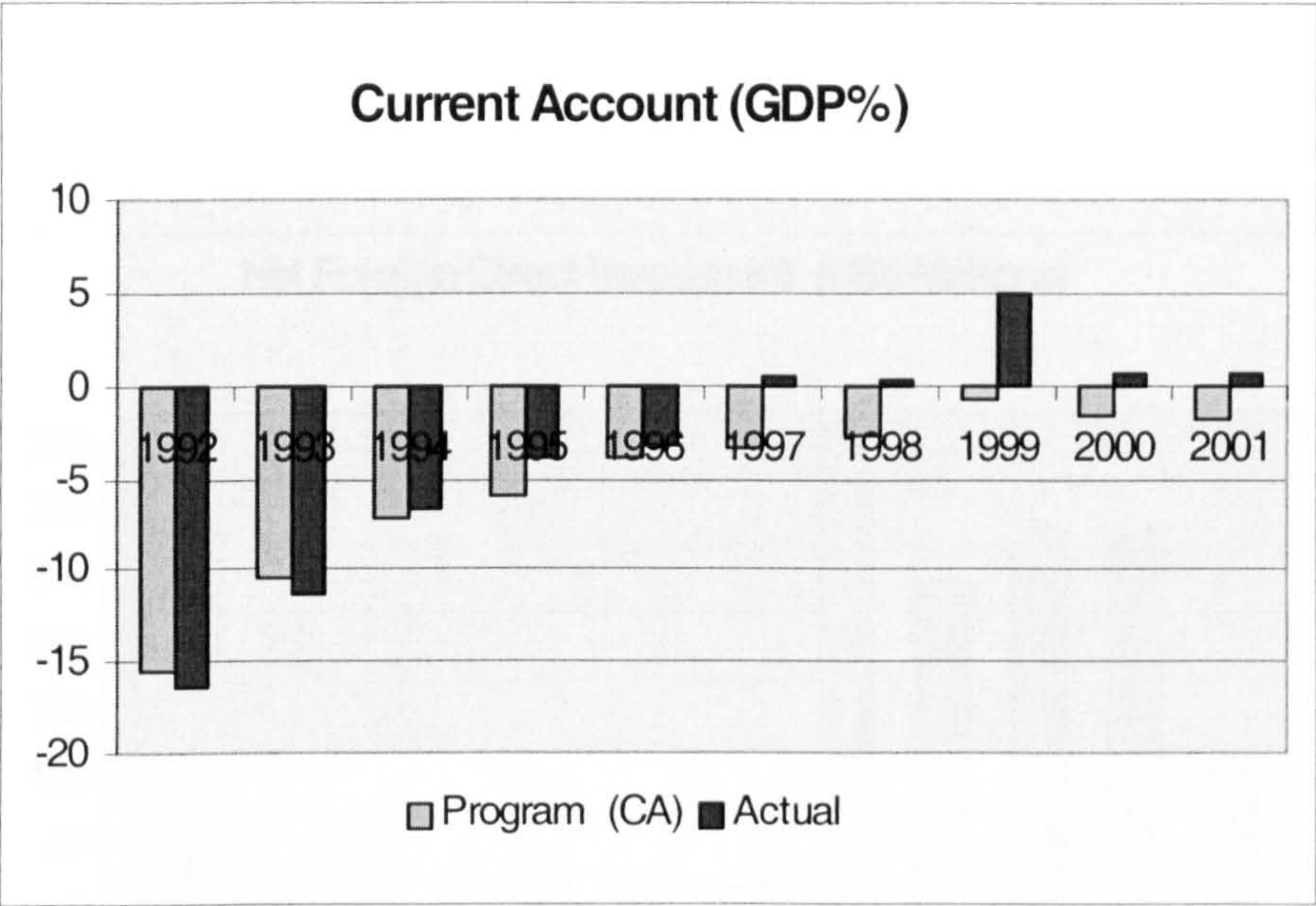
Source: CBJ (1992-1998) "Annual Report".



Source: CBJ (1992-1998) "Annual Reports"

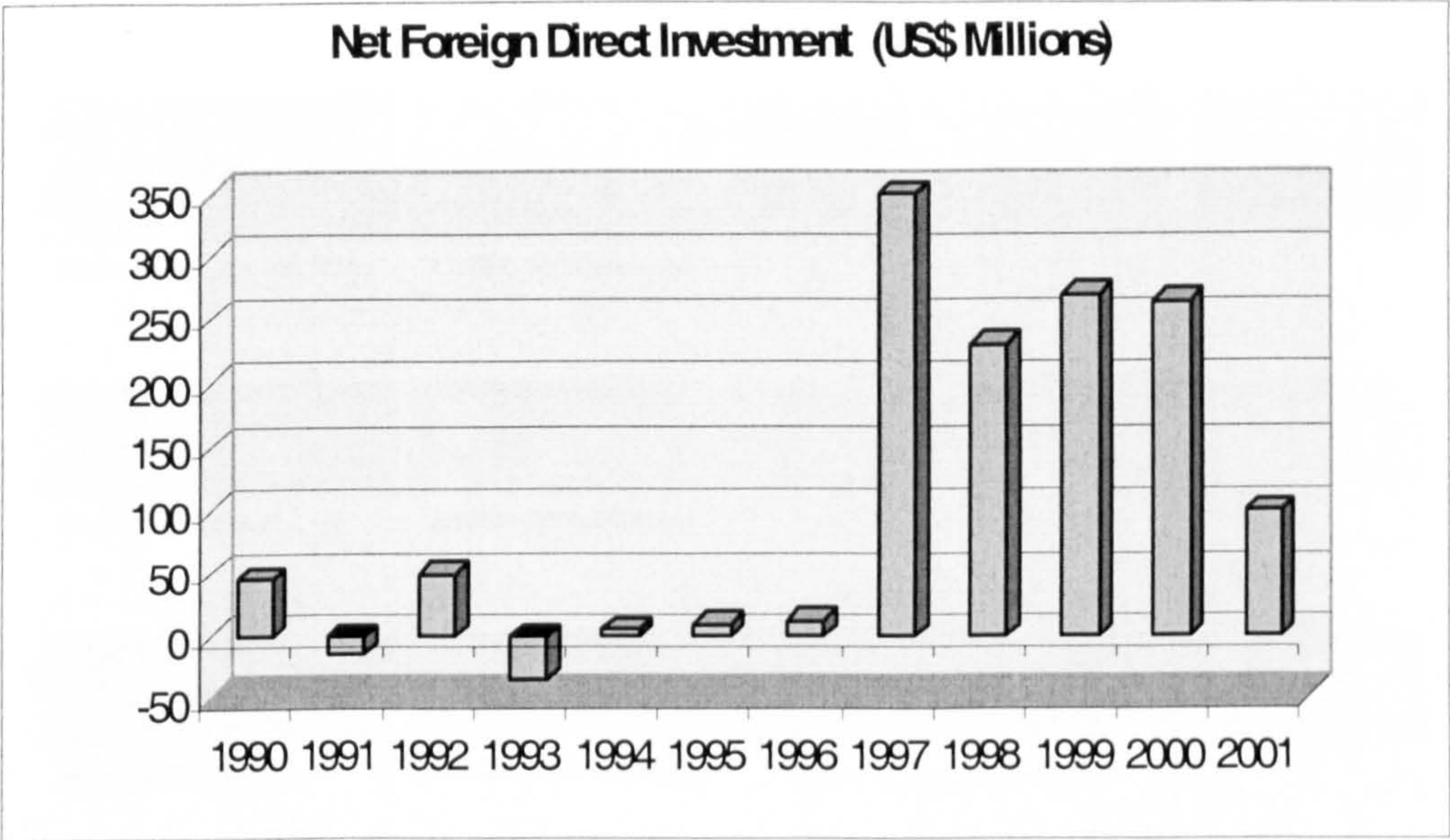


Source: CBJ (1992-1998) "Annual Report".



Source: CBJ (1992-1998) "Annual Report".

APPENDIX (iii): Net Foreign Direct Investment in Jordan (1990-2001)



*Source: (1) Data (1991-1999) from, Atlas Investment Group (2000) "Jordan's Economy in 1999," (May).
(2) The figure for 2000 and 2001 was taken from the United Nations "World Investment Report" 2000, / 2001.*

**APPENDIX (iv): Summary of the Macroeconomic Effects of SAPs in Jordan
(1992- 2001)**

Indicator	Actual-Target (Average)	Before-After (Average)*	Before-After (U Test)	Model (Dummy Var.)
Economic Growth Rate	Under-performance	+	0	0
Inflation Rate	Achieved	+	0	0
Current Account	Under-performance	-	0	#
Budget Deficit	Not achieved	+	+	#
Trade Balance	Under-performance	+	0	#
Exports	#	+	+	+
Imports	#	0	0	0
International Reserve	#	+	+	+

Notes: (i) (+) Positive change, (0) No effect, (-) Negative effect, (#) means it has not been tested.
(ii) *Annual average for period under consideration.

APPENDIX (v): Before-After Comparison of Jordan’s Macroeconomic Performance- Selected Indicators*

Indicator	(1979-1988)	(1992-2001)**
Real GDP Growth (%)	4.2	5.0
Inflation Rate (%)	5.9	2.9
Budget Deficit (as percent of GDP)	21.8	7.6
Trade Balance (as percent of GDP)	-40.8	-32.2
Current Account (as percent of GDP)	-2.7	-3.4
Exports (as percent of GDP)	14.4	24.3
Imports (as percent of GDP)	55.8	56.2
International Reserve (US\$ million)	701.3	2080.3

* Annual average for period under consideration.
 ** The table excludes all years where SAPs have been suspended.

BIBLIOGRAPHY

- Abdallah, A. (1997) "Recent developments in trade issues," In Tahir, J. (ed.) *Economic Theory Underlying Adjustment Policies in Arab Countries: Survey of Theoretical and Empirical Evidence*. Amsterdam: Elsevier, pp. 263-285.
- Abdallah, K. (1994) "Development strategy from 1950s to 1980s," In Hamarneh, M. (ed.) *Jordanian Economy Problems and Prospect*. Amman: Center for Strategic Studies, The University of Jordan (Arabic language).
- Abu Hammour, M. (2000) "Fiscal policy and economic reform in Jordan," In Al-Jomard, A. (ed.) *Evaluation of Foreign Aid in Jordan 1989-1999*. Amman: Center for Strategic Studies, The University of Jordan (Arabic Language).
- Acemoglu, D., Johnson, S. and Robinson, J. (2001) "The Colonial of comparative development: an empirical investigation," *American Economic Review*, Vol. 91, No. 5 (December) pp. 1369-1401.
- Agenor, P. P. and Montiel, P. (1996) *Development Macroeconomics*, Princeton New Jersey: University Press.
- Ahtime, L. M. (1997) "A Multivariate cointegration analysis of the aggregate import demand function for Kenya," Msc. Dissertation, University of Warwick.
- Alba, A. (n.d) *Adjustment programs in developing countries: expectations and outcomes*, Canadian International Development Agency. (The paper is based on the author's PhD theses, Alba, A. (1996) Adjustment and poverty in Philippines 1982-1990. University of Manchester.
- Al-Nabulsi, S. (1994) "Jordanian debt and the methods of economic reform in Jordan," In Hamarneh, M. (ed.) *Jordanian Economy Problems and Prospect*. Amman: Center for Strategic Studies, The University of Jordan (Arabic language).
- Al-Obaidan, A. (2002) "Efficiency effect of privatization in the developing countries," *Applied Economics*, Vol. 34, No. 1, pp. 111-117.
- Alonso-Gamo P. and El-Erian, M. (1997) "Economic reforms, growth, employment, and the social sectors in the Arab economics," In Kanaan T. (ed.) *The Social Effects of Economic Adjustment on Arab Countries*. Washington, D.C.: IMF.
- Aloul, S. (2003) "IMF team completes review of economic performance," *Jordan Times* (13 / November / 2003).

- Al-Smadi, T. (2000) "The role of the monetary policy in Jordan," In Al-Jomard, A. (ed.) *Evaluation of External Economics Aid in Jordan*. Amman: Strategic Studies Center, The University of Jordan (Arabic language).
- Atlas Investment Group (2000) "*Jordan's economy in 1999*," Report (May), Amman: Jordan
- Al-Wazani, K. (1994a) "Jordanian economy and Dutch disease," In Hamarneh, M. (ed.) *Jordanian Economy Problems and Prospect*. Amman: Center for Strategic Studies, The University of Jordan (Arabic language).
- Al-Wazani, K. (1994b) "*Structural adjustment program policies: Jordanian experience*," Economics of Jordan and Middle East. Report No. 3. Amman: Al- Urdun Al-Jadid Research Center (Arabic language).
- Arize, A. C. (1990) "An econometric investigation of export behavior in seven Asian developing economies," *Applied Economics*, Vol. 22, No. 7 (July) pp. 891-904.
- Arize, A. C., Chooekawong, P. and Prasanpanich, V. (2000) "Foreign trade behavior in Thailand: stable or unstable," *American Economist*, Vol. 44, No. 2, pp. 36-46.
- Atkinson, G. and Hamilton, K. (2003) "Savings, growth and resource curse hypothesis," *World Development*, Vol. 31, No. 11, pp. 1793-1807.
- Auty, R. (1994) "Industrial policy reform in six large Newly Industrializing Countries: the resource curse thesis," *World Development*, Vol. 22, No. 1, pp. 11-26.
- Ayres, R. (ed.) (1995) "*Development Studies: An Introduction Through Selected Readings*," Dartford: Greenwich University Press, pp. 678-682.
- Bahmani-Oskooee, M. (1986) "Determinants of international trade flows: the case of developing countries," *Journal of Development Economics*, Vol. 20, pp. 107-23.
- Bahmani-Oskooee, M. (1998) "Cointegration approach to estimate the long-run trade elasticities in LDCs," *International Economic Journal*, Vol. 12, No. 3 (Autumn) pp. 89-96.
- Balakrishnan, P. (1994) "How best to model inflation in India," *Journal of Policy Modeling*, Vol. 16, No. 6 (December) pp. 677-683.

- Balassa, B., Bueno, G. M., Kuczynski, P. and Simeonsen, M. H. (1986) *"Toward Renewed Economic Growth in Latin America,"* Washington, D.C.: Institute of International Economics.
- Barro, R. J. (1990) "Government spending in a simple model of endogenous growth," *Journal of political Economy*, Vol. 98 (October) pp. 103-25.
- Barro, R. J. and Sala-i-Martin, X. (1992) "Public finance in models of economic growth," *Review of Economic Studies*, Vol. 59, pp. 645-461.
- Beblawi, H. and Luciani, G. (1987) (eds.) *"The Rentier State,"* London: Croom Helm.
- Bernheim, D. (1989) "A Neoclassical perspective on budget deficits," *Journal of Economic Perspectives*. Vol. 3, No. 2 (Spring) pp. 55-72.
- Berry, A. (1995) "The social challenge of the new economic era in Latin America," *Discussion Papers* No. 8, Canada: Center for International Studies, University of Toronto.
- Bhagwati, J. (1994) "Free trade: old and new challenges," *Economic Journal*. Vol. 104, No. 423 (March) pp. 231-246.
- Bird, G. (1983) "Should developing countries use currency depreciation as a tool of balance of payments adjustment?," Review of the theory and evidence and a guide for the policymaker, *The Journal of Development Studies*, Vol. 19, No. 4, pp. 461-481.
- Bird, G. (2001) "What happened to the Washington consensus?" *World Economics*, Vol. 2, No. 4, pp. 33-51.
- Boetross, S. (1994) "Agricultural in Jordan," In Hamarneh, M. (ed.) *Jordanian Economy Problems and Prospect*. Amman: Center for Strategic Studies, The University of Jordan (Arabic Language).
- Branson, W. H. (1986) "Stabilization, stagflation, and investment incentives: the case of Kenya 1975-1980," In Edwards, S. and Ahmad, L. (eds.) *Economic Adjustment and Exchange Rates in Developing Countries*. Chicago: Chicago University Press, pp. 268-288.
- Burkett, P. and Dutt, A. k. (1991) "Interest rate policy, effective demand, and growth in LDCs," *International Review of Applied Economics*, Vol. 5, No. 2 (May) pp. 127-154.
- Carroll, K. B. (2003) *"Business as Usual? Economic Reform in Jordan,"* Oxford: Lexington Books.

- Cashin, P. (1995) "Government spending, taxes, and economic growth," *IMF Staff Papers*, Vol. 42 (June) pp. 237-269.
- CBJ (1980-2001) "*Annual Report*," Different issues between 1980 and 2001. Amman: Department of Research and Studies.
- CBJ (1996) "*Yearly Statistical Series (1964-1995)*," Special Issue, Amman: Department of Research and Studies.
- CBJ (1990-2002) "*Monthly Statistical Bulletin*," Different issues between 1990 and 2002. Amman: Department of Research and Studies.
- Chalira, Z. (1993) "Malawi's structural adjustment program 1981-1990 an evaluation of the impact of external factors and program design on program performance," Ph.D. Theses, Manchester University.
- Charemza, W. and Deadman, D. (1992) "*New Directions in Econometric Practice*," Brookfield, VT: Edward Edgar.
- Chowdhury, F. (1991) "Structural adjustment policies in the Third World," In Sobhan, R. (ed.) *Structural Adjustment Policies in the Third World Design and Experience*. Dhaka: The University Press.
- Chu, K. and Gupta, S. (eds.) (1998) "*Social Safety Nets: Issues and Recent Experiences*," Washington, D.C.: IMF.
- Clarke, H. D., Norpoth, H. and Whiteley, P. (1998) "It's about time: modelling political and social dynamics," In Scarbrough, E. and Tanenbaum, E. (eds.) *Research Strategies in the Social Sciences, A Guide to New Approaches*. Oxford: Oxford University Press.
- Cline, W. (1988) "International debt: progress and strategy," *Finance and Development*, Vol. 25, No. 2 (June) pp. 1-10.
- Collier, P. and Gunning, J. (1999) "The IMF's role in structural adjustment," *The Economic Journal*. Vol. 109, No. 459 (November) pp. 634-651.
- Connors, T. (1979) "The apparent effects of recent IMF stabilization program," *International Finance Discussion Papers*. Part, 135, April. Board of Governors of Federal Reserve System.
- Conway, P. (1994) "The IMF lending programs: participation and impact," *Journal of Development Economics*, Vol. 45, No. 2 (December) pp. 365-391.

- Corbo, V. and Webb, S. (1990) "Adjustment lending and the restoration of sustainable growth," *Journal of International Development*, Vol. 3, No. 2, pp. 135-162.
- Country Watch, (2002) "*Country review: Jordan 2001-2002*," Retrieved 5th February, 2003, from World Wide Web <<http://www.countrywatch.com/>>.
- Crisp, B. and Kelly, M. (1999) "The socioeconomic impacts of structural adjustment," *International Studies Quarterly*, Vol. 43, No. 3, pp. 533-552.
- Dahel, R. (1997) "Fiscal policy and adjustment," In Tahir, J. (ed.) *Economic Theory Underlying Adjustment Policies in Arab Countries: Survey of Theoretical and Empirical Evidence*. Amsterdam: Elsevier, pp. 129-133.
- Danaher, K. (ed.) (1994) "*Fifty Years is Enough: The Case Against the World Bank and the International Monetary Fund*," Global Exchange, Boston: South End Press
- Day, A. (1986) "*East Bank /West Bank, Jordan and the Prospects for Peace*," New York: Council on Foreign Relations Inc.
- Demery, L. and Addison, A. (1987) "Stabilization policy and income distribution in developing countries," *World Development*, Vol. 15, No. 12 (December) pp. 1483-1498.
- Dickey, D. A., Jansen, D. W. and Thornton, D. (1991) "A primer on cointegration with an application to money and income," *Review Federal Reserve Bank of ST. Louis*, (March) pp. 58-78.
- Dickey, D. A. and Fuller, W. A. (1979) "Distribution of the estimators for autoregressive time series with a unit root," *Journal of the American Statistical Association*, Vol. 74, pp. 427-431.
- Dickey, D. A. and Fuller, W. A. (1981) "Likelihood ratio statistics for autoregressive time series with a unit root," *Econometrica*, 49, No. 4 (July) pp. 1057-1072.
- Dixon, C., Simon, D. and Narman, A. (1994) "Introduction: the nature of structural adjustment," In Simon, D. et. al. (eds.) *Structural Adjustment in Africa, Poverty, Debt and Basic Needs*. London: Plute Press.
- Dornbusch, R. and Helmers, F. (eds.) (1988) "*The Open Economy Tools for Policy Makers in Developing Countries*," Oxford and New York: University Press.
- Dornbusch, R., Fischer, S. and Startz, R. (2001) "*Macroeconomics*," Eighth Edition, New York: McGraw-Hill Irwin.

- Doroodian, K. (1993) "Macroeconomic performance and adjustment under policies commonly supported by the IMF," *Economic Development and Cultural Change*, Vol. 41, No. 4, pp. 848-860.
- DOS (2001) "*Jordan in Figures*," Amman: Jordan.
- DOS (2002) "*Employment and Unemployment*," Retrieved 8th August, 2002, from World Wide Web <<http://www.dos.gov.jo/>>.
- Dougherty, P. (1988) "*Jordan goes down the path of austerity*," November 18, London: Middle East Economic Digest, pp. 4-5.
- Dutta, D. and Ahmad, N. (1999) "An aggregate import demand function for Bangladesh: a cointegration approach," *Applied Economics*, Vol. 31, No. 4 (April) pp. 465-472.
- Edwards, S. (1986) "Are devaluation contractionary? *Review of Economics and Statistics*," Vol. 68, No. 3 (August) pp. 501-508.
- Edwards, S. (1989) "Structural adjustment policies in highly indebted countries," In Sachs, J (ed.) *Developing Country Debt and the World Economy*. Chicago and London: The University of Chicago Press, pp. 250-253.
- EIU (2001b) "Country Report: Jordan," London: London Business International.
- EIU (2001a) "Country Profile: Jordan," London: London Business International.
- EIU (1993) "Country Profile: Jordan," London: London Business International.
- EIU (1997) "Country Profile: Jordan," London: London Business International.
- EIU (1998) "Country Report: Jordan," London: London Business International.
- El-Said, H. (2000) "Jordan: the political economy of public growth and reform in a rent-seeking economy 1973-1998," Lebanon: Studies and Research Center on the Contemporary Middle East (CERMOC) pp. 5-12.
- Engle, R. and Granger, C. (1987) "Co-integration and error correction: representation, estimation and testing," *Econometrica*, Vol. 55, No. 2 (March) pp. 251-76.
- Ennenbach, W. (2002) "Jordan given high marks for economic reform efforts," *Jordan Times*. (18/ September /2002.).

- ESCWA, (1991) "*The impact of Gulf crisis on Jordanian economy*," Retrieved 25th May, 2002, from World Wide Web
<<http://www.escwa.org.lb/information/iraq/analysis/iraqjordan.html>>.
- Feiler, G. (1993) "Palestinian employment options," *Middle East Journal*. Vol. 47, No. 4, pp. 633-651.
- Feldstein, M. and Horioka, C. (1980) "Domestic savings and international capital flows," *The Economic Journal*. Vol. 90, No. 358 (June) pp. 314-329.
- Fischer, S. (1993) "The role of macroeconomic factors in growth," *Journal of Monetary Economics*, Vol. 32 (December) pp. 485-512.
- Foulo, T. and Grafton R. Q. (1998) "Structural adjustment in Lesotho, an evaluation," *Journal of Policy Modeling*, Vol. 20, No. 6 (December) pp. 791-814.
- Friedman, M. (1948) "A monetary and fiscal framework for economic stability," *American Economic Review*, Vol. 38, pp. 245-264.
- Gani, A. (1999) "Foreign direct investment in Fiji," *Pacific Economic Bulletin*, Vol. 14, No. 1.
- Ghamdi, A. (1989) "Interest rate and the money demand function in developing countries: the case of Saudi Arabia," *Pakistan Journal of Applied Economics*, No. 2.
- Gilbert, C. and Vines, D. (eds) (2000) "*The World Bank: Structural and Policies*," Global Economic Institutions, 3. Cambridge: Cambridge University Press.
- Giovannini, A. (1983) "The interest elasticity of savings in developing countries: the existing evidence," *World Development*, Vol. 11, No. 7, pp. 197-217.
- Goldsbrough, D. *et. al*, (1996) "Reinvigorating growth in developing countries; lessons from adjustment policies in eight economics," *IMF Occasional Paper* No. 139.
- Goldstein, M. (1986) "The global effects of Fund-supported adjustment programs," *IMF Occasional Paper*, No. 42.
- Goldstein, M. and Montiel, P. (1986) "Evaluating Fund stabilization programs with multicountry data: some methodological pitfalls," *IMF Staff Papers*, Vol. 33, No. 2 (December) pp. 304 -340.

- Gonzalo, J. (1994) "Five alternative methods of estimating long-run relationships", *Journal of Econometrics*, Vol. 60, No. 1, 2 (January-February) pp. 203-33.
- Granger, C.W.J (1969) "Investigating causal relations by econometric methods and cross-spectral methods," *Econometrica*, Vol. 37, No. 3, pp. 422-438.
- Granger, C.W.J and Newbold, P. (1973) "Some comments on the evaluation of economic forecasts," *Applied Economics*, Vol. 5, No. 1 (March) pp. 35-47.
- Granger, C.W.J (1981) "Some properties of time series data and their use in econometrics model specification," *Journal of Econometrics*, Vol. 16, No. 1 (May) pp. 121-130.
- Gray, C. and Linn, J. (1988) "Improving public finance for development," *Finance and Development*, Vol. 25, No. 3.
- Gubser, P. (1983) *Jordan Crossroads of Middle Eastern Events*, London: Croom Helm.
- Gujarati, D. (2003) *Basic Econometrics*, Fourth Edition, New York: McGraw-Hill.
- Gylfason, T. (1987) *Credit Policies and Economic Activity in Developing Countries with IMF Stabilization Programs*, Studies in International Finance, No. 60, New Jersey: Princeton University, Princeton University Press
- Gylfason, T. and Schmid, M. (1983) "Does devaluation cause stagflation?" *Canadian Journal of Economics*, Vol. 16, No. 4 (November) pp. 641-654.
- Hammad, K. (1987) "The role of foreign aid in the Jordanian economy, 1959-1983," In Khader, B. and Badran, A. (eds.) *The Economic Development of Jordan*. London: Croom Helm.
- Harrigan, J. and Mosley, P. (1991) "Evaluating the impact of World Bank structural adjustment lending 1980-1987," *Journal of Development Studies*, Vol. 27 No. 3 (April) pp. 63-94.
- Harris, R. and Sollis, R. (2003) *Applied Time Series Modelling And Forecasting*, London: Chichester, John Wiley and Sons Ltd.
- Henry, A. (2003) "Jordanian economy expectation and challenging of 2004," *Al- Rai* (Arabic Daily Newspaper, Jordan), 21/December/ 2003.
- Holsen, J. (1991) "An overview of structural adjustment," In Sobhan, R. (ed.) *Structural Adjustment Policies in the Third World, Design and Experience*, and Dhaka: The University Press, pp. 11-12.

- Hoogvelt, A. (1997) *"Globalization and the Postcolonial World: The New Political Economy of Development,"* London: MacMillan Press.
- Husted, S. and Melvin, M. (2001) *"International Economics,"* Fifth Edition, London: Addison Wesley Longman, pp. 523-540.
- IMF (1983) "Interest rate reform and stabilization policies," *Occasional Paper*, No, 22.
- IMF (1990-2002) *"International Financial Statistics Yearbook"* Different issues between 1990 and 2002, Washington, D.C.: IMF.
- IMF (1997b) "25th Anniversary Year," Feb (24).
- IMF (1995) *"Guidelines for fiscal adjustment,"* Fiscal Affairs Department, Pamphlet Series, No. 49. IMF, pp. 1-42
- IMF (1996) *"IMF Survey,"* 4 March, pp. 82-83.
- IMF (1997a) *"IMF Survey,"* 24 February, pp. 58.
- IMF (1998) *"External evaluation of the ESAF,"* Report by a Group of Independent Experts. Washington, D.C.: IMF.
- IMF (2002a) *"Fiscal adjustment in IMF-supported programs,"* Issues paper for an evaluation by the Independence Evaluation Office (IEO): IMF
- IMF (2002b) *"What is the IMF,"* Retrieved 7th March, 2003, from World Wide Web: <[http:// www.imf.org/ pubs/ft/exrp/what.htm](http://www.imf.org/pubs/ft/exrp/what.htm)>.
- IMF (2003) *"Jordan: Financial Position in the Fund"* Retrieved 5th may, 2004, from World Wide Web <www.imf.org/external/np/tre.../exfin2.cfm/memberkey>.
- IMF (1988) "Fiscal policies, adjustment and stabilization," *Finance And Development*, Vol. 25, No. 3 pp. 9-11.
- IMF (1999) "Article IV Consultation and Review Under Stand-By Arrangement", Staff Report: IMF.
- Iqbal, Z. (1993) "Macroeconomic effects of adjustment lending in Pakistan," Tilburg University, unpublished paper.
- Iqbal, Z., James, J. and Pyatt, G. (2000) "Three-gap analysis of structural adjustment in Pakistan," *Journal of Policy Modeling*, Vol. 22, No. 1 (January) pp. 117-138.

- Jang, C. (2002) "Exports growth: is the export-led growth hypothesis valid for provincial economies?" *Applied Economics*, Vol. 34, No. 1 (January) pp. 63-77.
- Jaradat, H. (1994) "International Monetary Fund policies: Jordan's experience," Msc. Dissertation, The University of Jordan (Arabic Language).
- Joffe, G. (ed.) (2002) "*Jordan in Transition 1990-2000*," London: Hurst and Company.
- Johansen, S. (1988) "Statistical analysis of cointegration vectors," *Journal of Economic Dynamics and Control*, Vol. 12, No. 2,3 (June-September) pp. 231-254.
- Johansen, S. and Juselius, K. (1990) "Maximum likelihood estimation and inference on cointegration-with application to the demand for money," *Oxford Bulletin of Economics and Statistics*, Vol. 52, pp. 169-210.
- Jordanian Government (1989) "*Structural Adjustment Program*" Amman: Jordan.
- Jordan Investment Board (JIB) (2001) "*Investment Promotion Law*," Retrieved 18th December, 2002, from World Wide Web
<<http://www.jordaninvestment.com/inves/>>.
- Kanaan, T. and Kardoosh, M. (2002) "The story of economic growth in Jordan: 1950-2000," October (Draft), Amman, Jordan.
- Kanovsky, E. (1976) "*The Economy of Jordan: The Implications of Peace in the Middle East*," Telaviv: University Publishing Projects.
- Kanovsky, E. (1997) "The Middle East economies: the impact of domestic and international politics," *Mideast Security and Policy Studies*, No. 31 (February). Begin-Sadat Center for Strategic Studies, Israel: Bar-Ilan University.
- Kardoosh, M. (2003) "Economic focus: socio-economic reform-tops priority," *Jordan Times* (21/ 2/ 2003).
- Karingi, S. and Siriwardana, S. (2001) "Structural adjustment policies and the Kenyan economy a Computable General Equilibrium Model analysis," *African Development Review*, Vol. 13, No. 1, pp. 24-45.
- Kaufmann, D., Kraay, K. and Zoido-Lobaton, P. (1999) "Governance matters," (May). World Bank.

- Kelly, M. (1982) "Fiscal adjustment and Fund-supported programs 1971-1980," *IMF Staff Papers*, Vol. 29 (June) pp. 592-595.
- Kenan, P. (1986) *"International Money and Macroeconomics: An Agenda for Research,"* Princeton, New Jersey: Princeton University.
- Keys to the Kingdom / Economy (n.d). Retrieved 8th August, 2001, from World Wide Web <<http://www.kinghussein.gov.jo/jordan>>.
- Khan, M. (1991) "Empirical aspects of Fund-supported adjustment programs," In Sobhan, R. (ed.) *Structural Adjustment Policies in the Third World, Design and Experience*. Dhaka: The University Press.
- Khan, M. (1985) "An analytical approach to interest rate determination in developing countries," *The Pakistan Development Review* xxiv, 3, 2 (Autumn/Winter).
- Khan, M. (1990) "The macroeconomic effects of Fund-supported adjustment programs," *IMF Staff papers*, Vol. 37, No. 2 pp. 198-210.
- Khan, M. and Knight, M. (1982) "Some theoretical and empirical issues relating to economic stabilization in developing countries," *World Development*, Vol. 10, No. 9, pp. 709-730.
- Khan, M. and Knight, M. (1985) "Fund-supported adjustment programs and economic growth," *Occasional Paper*, No. 41, pp. 1-33.
- Khan, M. and Sharma, S. (2001) "IMF conditionality and country ownership of programs," *IMF Working Paper*, WP/01/142, pp. 1-31.
- Khan, S. (1999) *"Do World Bank and IMF Policies Work?,"* United Kingdom : Macmillan Press, pp. 32-34.
- Khan, M. Nsouli, S. and Wong, C. H. (2002) *"Macroeconomic Management Programs and Policies,"* Washington, D.C.: IMF.
- Khatib, F. (1991) "Foreign aid and economic development in Jordan: an empirical investigation," In Wilson, R. (ed.) *Politics and the Economy in Jordan*. London and New York: Routledge.
- Kiely, R. (1998) "The crisis of global development," In Kiely, R. and Marfleet, P. (eds.) *Globalization and the Third World*. London: Routledge.
- Killick, T. (1984) "The impact of Fund stabilization programs," In Killick, T. (ed.) *The Quest for Economic Stabilization: The IMF and the Third World,* London: Heinemann Educational in Association with the Overseas Development Institute, pp. 227-269.

- Killick, T. (1995) *"IMF Programs in Developing Countries: Design and Impact,"* Development Policy Studies. London: Routledge.
- Killick, T., Malik, M. and, Manuel, M. (1992) "What can we know about the effects of the IMF program," *World Economy*, Vol. 15, No. 5 pp. 576-577.
- Kleinberg, R. and Clark, J. (eds.) (2000) *"Economic Liberalization Democratization and Civil Society in the Developing World,"* New York: Macmillan Press.
- Kreishan, F. (1997) "Industrial shareholding companies and their role in the economy of Jordan" M.A. Dissertation, The University of Jordan (Arabic Language).
- Krugman, P. Taylor, L. (1978) "Contractionary effects of devaluation," *Journal of International Economics*, Vol. 8, No. 3, pp. 445-456.
- Kurdi, W. (1993) "The impact of structural adjustment on the Turkish economy," PhD Thesis, Durham University.
- Lavy, V. and Sheffer, E. (1991) *"Foreign Aid and Economic Development in the Middle East, Egypt, Syria and Jordan,"* New York: Praeger Publishers, pp. 15-28.
- Linda, M. and Dimitri, A. (1993) "Dollar movements and inflation: a cointegration analysis," *Applied Economics*, Vol. 25, No. 12 (December) pp. 1483-1488.
- Maciejewski, E. and Mansur, A. (ed.) (1996) "Jordan: strategy for adjustment and growth," *IMF Occasional Papers*, No. 136.
- Mackinnon, J. G. (1991) "Critical values for cointegration tests," In Engle, R. F. and Granger, C.W.J (eds.), *Long-run Economic Relationships: Readings in Cointegration*. Oxford: Oxford University Press.
- Malik, M. (1999) "Elites bargains and the onset of political liberalization in Jordan," *Comparative Political Studies*, Vol. 32, No. 1, pp. 100-129.
- Masih, R. and Masih, A. (1996) "Macroeconomic activity dynamics and Granger causality: new evidence from a small developing economy based on a vector error-correction modelling analysis," *Economic Modelling*, Vol. 13, No. 3 (July) pp. 407-426.
- Mazur, M. (1979) *"Economic Growth and Development in Jordan,"* Boulder, Colorado: Westview Press, pp. 81-132.

- McGillivray, M., White H. and Ahmed, A. (1995) "Evaluation the effectiveness of structural adjustment policies on macroeconomic performance: a review of the evidence with special reference to Pakistan," *Pakistan Journal of Applied Economic*, Vol. xi, No 1, 2, pp. 57-76.
- MEED (2002a) "Data Bank," *Journal of The Middle East Business Weekly*, Vol. 46, No. 1, pp. 30-32.
- MEED (2002b) "New IMF round forces subsidy cuts," News letter 19/April/2002 Retrieved May, 2002, from World Wide Web <<http://www.meed.com>>.
- Michel, C. (1997) "*The Globalization of Poverty: Impacts of IMF and World Bank Reforms*," London: Zed Books.
- Milton-Edwards, B. and Hinchcliffe, P. (2001) "*Jordan: Hashemite Legacy*," London: Routledge.
- Mishal, S., Kuperman, R. and Boas, D. (2001) "*Investment in Peace: The Politics of Economic Cooperation between Israel, Jordan, and the Palestinian Authority*," Brighton: Sussex Academic Press, pp. 30-34.
- MOP (1993) "*Economic and Social Development 1993-1997*," Amman: Jordan.
- MOP (2000) "*Jordan Economic Overview*," Amman: Jordan.
- MOP (1986) "*Five Year Plan for Economic and Social Development 1986-1990*," Amman, Jordan, pp. 2-18.
- Mosley, P. (1987) "*Conditionality as Bargaining Process: Structural Adjustment Lending, 1980-1986, Essays in International Finance*" Number 168, New Jersey: Princeton University.
- Mosley, P., Harrigan, J. and Toye, J. (1995) "*Aid and Power: The World Bank and Policy-Based Lending*," Vol. 1, 2. London: Routledge.
- Mussa, M. and Savastano, M. (1999) "The IMF approach to economic stabilization," *IMF Working Paper*, WP/99/04. pp. 1-42.
- Nashashibi, K., Elhage, M. and Fedelino, A. (2001) "Financial liberalization in Arab countries," In Zubair, I. *Macroeconomic Issues and Policies in the Middle East and North Africa*. Washington, D.C.: IMF pp. 62-63.
- Online News Hour (2002) "*Bush announces more aid with reform*," Retrieved 22 March, 2003, from World Wide Web <http://www.pbs.org/newshour/updates/mexico_3-22-2.html>.

- Pastor, M. (1987) "The effects of IMF programs in the Third World: debate and evidence from Latin America," *World Development*, Vol. 15, No. 2, pp. 249-262.
- Pender, J. (2001) "From structural adjustment to comprehensive development framework, conditionality transformed," *Third World Quarterly*, Vol. 22, No. 3 pp. 397-411.
- Piro, T. (1998) *The Political Economy of Market Reform in Jordan*, Oxford: Cumnor Hill.
- Polak, J. J. (1991) *The Changing Nature of IMF Conditionality*, International Finance Section, Princeton University: Princeton.
- Price, S. (1998) "Cointegration and modelling the long-run," In Scarbrough, E. and Tanenbaum, E. (eds.) *Research Strategies in the Social Sciences, A Guide to New Approaches*. Oxford: Oxford University Press.
- Przeworski, A. and Vreeland, J. R. (2000) "The effect of IMF programs on economic growth," *Journal of Development Economics*, Vol. 62, pp. 385-421.
- Pugel, T. and Lindert, P. (2000) *International Economics*, Chicago: McGraw-Hill.
- Ramirez, M. (1996) "The latest IMF-sponsored stabilization program: does it represent a long-term solution for Mexican's economy?," *Journal of International American Studies and World Affairs*. Vol. 38, No. 4 (Winter) pp. 129-156.
- Rao, M. and Nallari, R. (2001) *Macroeconomic Stabilization and Adjustment*, New Delhi: Oxford University press.
- Reichmann, T. and Stillson, R. (1978) "Experience with programs of balance of payment adjustment: stand-by arrangements in the higher trenches, 1963-1972," *IMF Staff Papers*, Vol. 25 (June) pp. 293-310.
- Ross, A. (1991) *Economic Stabilization for Developing Countries*, Brookfield, VT: Edward Elgar.
- Rother, C. P. (2000) "Inflation in Albania," *IMF Working Paper*, WP/00/207, and Washington, D.C.: IMF.
- Ryan, C. (2002) *Jordan in Transition: From Hussein to Abdullah*, London: Lynne Rienner Publishers.
- Santos-Pavolino, A. P. (2002) "The effects of trade liberalization on import in selected developing countries," *World Development*. Vol. 30, No. 6, pp. 959-974.

- Sawalha, F. (2003) "World Bank to support Jordan in case of war," *Jordan Times*, Friday-Saturday (7/8-March/2003).
- Share, M. (1991) "Jordan's trade and balance of payments problems," In Wilson, R. (ed.) *Politics and the Economy in Jordan*. London and New York: Routledge.
- Shirley, M. (1988) "The experience with privatization," *Finance and Development*. Vol. 25, No. 3, pp. 34-35.
- Silva Lopes, J. (1989) "Policies of economic adjustment to correct external imbalances," In Roe, A., Roy, J. and Sengupta, J. *Economic Adjustment in Algeria, Egypt, Jordan, Morocco, Pakistan, Tunisia, and Turkey*. Washington, D.C.: World Bank, pp. 26-30.
- Snowdon, B. (2001) "Redefining the role of state: Joseph Stiglitz on building a post-Washington consensus," *World Economics*, Vol. 2, No. 3. (July-September) pp. 45-86.
- Snowdon, B. (2004) "Beyond the 'Ivory Tower': Stanley Fischer on the economics of contemporary global issues," *World economics*, Vol. 5, No. 1 (January-March) pp. 67-144.
- Stewart, F. (1990) "The many faces of adjustment," paper presented at the conference of policy-based lending, University of Manchester.
- Stiglitz, J. (2002) *Globalization and its Discontents*, London: Allen Lane, the Penguin Press.
- Summers, L. and Pritchett, L. (1993) "The structural adjustment debate," *The American Economic Review*. Vol. 83, No. 2 (May) pp. 383-389.
- Taghavi, M. (2000) "Debt, growth and inflation in large European economies: a vector auto-regression analysis," *Journal of Evolutionary Economics*, Springer-Verlag.
- Tahir, J. (1997a) "Recent developments in monetary issues survey of theory and evidence," In Tahir, J.(ed.) *Economic Theory Underlying Adjustment Policies in Arab Countries: Survey of Theoretical and Empirical Evidence*. Amsterdam: Elsevier, pp. 12-20.
- Tahir, J. (1997b) "Recent developments in interest rate issue and policies: a survey of theoretical and empirical literature," In Tahir, J. *Economic Theory Underlying Adjustment Policies in Arab Countries: Survey of Theoretical and Empirical Evidence*. Amsterdam: Elsevier, pp. 90-105.

- Tarp, F. (1993) *"Stabilization and Structural Adjustment: Macroeconomic Frameworks for Analyzing the Crisis in Sub-Saharan Africa,"* London and New York: Routledge, pp. 59- 70.
- Taylor, L. (1988) *"Varieties of Stabilization Experience: Towards Sensible Macroeconomics in the Third World,"* Oxford: Clarendon Press.
- Taylor, L. (1991) *"Income Distribution, Inflation, and Growth: Lectures on Structuralist Macroeconomic Theory,"* Cambridge: MIT Press.
- Thirlwall, A. (1982) *"Balance of Payments Theory and the United Kingdom experience,"* London: Macmillan Press.
- Thomas, R. L. (1993) *"Introductory Econometrics: Theory and Applications,"* Second Edition, London: Longman.
- Thomas, V. and Nash, J. (1991) *"Best Practices in Trade Policy Reform,"* Washington, D.C.: World Bank.
- Todaro, M. (1997) *"Economic Development,"* Sixth Edition, London: Longman.
- Toye, J. (1993) *"Dilemmas of Development: Reflections on the Counter-revolution in Development Theory and Practice,"* Oxford : Basil Blackwell.
- Toye, J. (1994) "Structural adjustment, context, assumptions, origin and diversity," In Der Hoeven, R. and Der Kraaij, F. (eds.) *Structural Adjustment and Beyond in Sub-Shara Africa: Research and Policy Issues.* London: Heinemann, Hague, pp. 18-34.
- Ugur, M. (ed.) (2002) *"An Open Economy Macroeconomics Reader,"* London: Routledge.
- Ul-Haque, N. and Khan, M. (1998) *"Do IMF-supported programs work? A survey of cross-country empirical evidence," IMF Working Paper, 98/169, pp. 2-18.*
- United Nations (2000/2001) *"World Investment Report"* UNCTAD: United Nations Publications.
- Upadhyaya, K. (1999) "Currency devaluation, aggregate output and the long run: an empirical study," *Economics Letters, Vol. 64, No. 2 (August) pp. 197-202.*
- Weinberg, S. and Goldberg, K. (1990) *"Statistics for the Behavioral Sciences,"* Cambridge: Cambridge University Press.

- WhirledBank (n.d) "*Structural Adjustment Program*," Retrieved March, 2001, from World Wide Web <<http://www.whirledbank.org/development/sap.html>>.
- Wijnbergen, S. (1986) "Exchange rate management and stabilization policies in developing countries," *Journal of Development Economics*. Vol. 23, No. 2 (October), pp. 205-405.
- Williamson, J. (1990) "What Washington means by policy reform," In Williamson, J. "*Latin American Adjustment: How Much Has Happened?*" Washington, D.C. : Institute of International Economics.
- Wood, A. (1997) "The IMF's enhanced structural adjustment facility : what role for development," (September). Bretton Woods Project.
- World Bank (2001-2002) "Hashemite Kingdom of Jordan," Update the World Bank Group, A Quarterly Publication of the Jordan Country Unit (Different Reports).
- World Bank (1998) "*Jordan and the World Bank: Working Together for Growth and Prosperity*," Washington, D.C. : World Bank, pp. 4-12.
- World Bank (2001) "Privatization: the Jordanian success story," A Quarterly Publication of the Jordan Country Unit, (October) Washington, D.C.: World Bank.
- World Bank (1989) "*World Development Report*," New York: Oxford University Press.
- World Bank (1993) "*The East Asian Miracle: Economic Growth and Public Policy*," A World Bank Policy Research Report. Oxford: Oxford University Press.
- World Bank (1994) "Jordan consolidating economic adjustment and establishing the base for sustainable growth," Report No. 1264 Jo.
- World Bank (1999) "*World Bank Development Indicator*," Washington, D.C. World Bank
- World Bank (2000) "*World Development Report 1999/2000*," Washington, D.C. World Bank
- World Bank (2002) "*The Hashemite Kingdom of Jordan Country Assistance Strategy*," Retrieved 10th January, 2002, from World Wide Web <www.worldbank.org/cas>.

- Wright, P. (1980) "World Bank lending for structural adjustment," *Finance and Development*. Vol. 17, No. 3 pp. 20-23.
- Zack-Williams, A. (2000) "Social consequences of structural adjustment," In Mohan, G, *et. al.* *Structural Adjustment, Theory, Practice, and Impacts*. London and New York: Routledge, pp. 59-73.
- Zack-Williams, A., Brown, E. and Mohan, E. (2000) "The long road to structural adjustment," In Mohan, G. *et. al.*, *Structural Adjustment, Theory, Practice and Impact*. London and New York: Routledge.
- Zaidan, T. M. (1999) "Does devaluation improve the trade balance of Iraq?," *OPEC Review*, Organization of the Petroleum Exporting Countries, (June) pp. 696-703.
- Zaki, M. (2001) "IMF-Supported stabilization programs and their critics: evidence from the recent experience of Egypt," *World development*. Vol. 29, No. 11, pp. 1867-1883.
- Zulu, J. and Nosouli, M. (1985) "Adjustment programs in Africa: the recent experience," *Occasional paper*, No. 34, IMF.